Forensic DVR User's Manual

DVR-F40

Table of Contents

1 Features and Specifications 10

1.1 Features 10

1.2 Specifications 10

1.3 Special Features 13

2 Overview and Controls 15

2.1 Front Panel 15

2.2 Rear Panel 15

2.3 Remote Control 16

2.4 Mouse Control 17

2.5 Virtual Keyboard 18

3 Installation and Connections 19

3.1 Check Unpacked DVR 19

3.2 HDD Installation 19

3.2.1 Choose HDDs 19
3.2.2 Calculate HDD Size 19
3.2.3 HDD Installation 19

3.3 CD/DVD Burner Installation 20

3.4 Desktop and Rack Mounting 20

3.4.1 Desktop Mounting 20
3.4.2 Rack Mounting 20

3.5 Connecting Power Supply 20

3.6 Connecting Video Input and Output Devices 20

3.6.1 Connecting Video Input 20
3.6.2 Connecting Video Output 21

3.7 Connecting Audio Input & Output, Bidirectional Audio, Looping Video 21

3.7.1 Audio Input/One Audio Output 21
3.7.2 Alarm Input and Relay Output 22
3.7.3 Alarm Input 22
3.7.4 Alarm Output 23
3.7.5 Alarm Input and Output Details 23
3.7.6 Relay Output Description 25
3.8 RS232 26
3.9 RS485 27
3.10 Other Interfaces 27
4 Overview of Navigation and Controls 28
4.1 Login, Logout & Main Menu 28
4.1.1 Login 28
4.1.2 Main Menu 28
4.1.3 Logout 29
4.1.4 Auto Resume after Power Failure 29
4.1.5 Replace button battery 29
4.2 Recording operation 29
4.2.1 Live Viewing 29
4.2.2 Manual Record 29
4.3 Search & Playback 31
4.3.1 Search Menu 31
4.3.2 Basic Operation 33
4.3.3 Backup in search interface 35
4.3.4 Calendar 35
4.4 Record setup (Schedule) 35
4.4.2 Basic Operation 36
4.5 Motion Detect 37
4.5.1 Go to Detect Menu 37
4.5.2 Motion Detect 37
4.5.3 Video Loss 40
4.5.4 Camera Masking 40
4.6 Alarm Setup and Alarm Activation 41
4.6.1 Go to alarm setup interface 42
4.6.2 Alarm setup 42
4.7 Real-time Backup and Burn 44

4.7.1 Real-time Backup 44
4.7.2 Backup 46
4.8 CD playback 49
4.9 PTZ Control and Color Setup 50
4.9.1 Cable Connection 50
4.10 PTZ Setup 51
4.11 Temperature/Humidity Overlay 52
4.12 Color Setting 52
5 Understanding of Menu Operations and Controls 54
5.1 Menu Tree 54
5.2 Main Menu 54
5.3 Setting 55
5.3.1 General 55
5.3.2 Encode 57
5.3.3 Schedule 58
5.3.4 RS232 58
5.3.5 Network 59
5.3.6 Alarm 66
5.3.7 Detect 66
5.3.8 Pan/Tilt/Zoom 66
5.3.9 Display 67
5.3.10 Default 68
5.4 Search 69
5.5 Advanced 69
5.5.1 HDD Management 70
5.5.2 Abnormity 71
5.5.3 Alarm Output 71
5.5.4 Manual Record 72
5.5.5 Account 72
5.5.6 Auto Maintain 73
5.5.7 TV Adjust 73
5.6 Information 74
5.6.1 HDD Information 74
5.6.2 BPS 75
5.6.3 Log 75
5.6.4 Version 75
5.6.5 Online Users 76

5.7 Backup 76

5.8 Exit 76

6 About Auxiliary Menu 78

6.1 Go to Pan/Tilt/Zoom Menu 78

6.1.1 3D Intelligent Positioning Key 78

6.2 Preset /Patrol / Pattern /Border Function 79

6.2.1 Preset Setup 80
6.2.2 Activate Preset 80
6.2.3 Patrol Setup 80
6.2.4 Activate Patrol 80
6.2.5 Pattern Setup 80
6.2.6 Activate Pattern Function 81
6.2.7 Border Setup 81
6.2.8 Activate Border Function 81
6.2.9 Flip 81

7 WEB CLINET OPERATION 83

7.1 Network Connection 83

7.2 Login and logout 83

7.2.1 Real-time Monitor 86
7.2.2 Burning 87
7.2.3 PTZ 88
7.2.4 Color 91
7.2.5 Picture Path and Record Path 91
7.2.6 Menu Interface Switch 92

7.3 Configure 93

7.3.1 System Information 93
7.3.2 Setting 95

7.4 Search 114

7.4.1 Download 115

7.5 Alarm 116

7.6 About 116

7.7 Log out 117

7.8 Un-install Web Control 117

8 Enterprise Professional Surveillance System 118

8.1 Log in 118

8.2 Enable Monitor 119

8.3 Add New Device 120

9 Player Operation 122

9.1 General Introduction 122

9.2 Play File 123

9.3 Right Mouse Menu 123

9.3.1 Convert to AVI 124
9.3.2 Parameter Setting 125

10 FAQ 127

Appendix A HDD Capacity Calculation 131

Appendix B Compatible USB Drive List 132

Appendix C Compatible CD/DVD Burner List 133

Appendix D Compatible CD/DVD CD List 134

Appendix E Compatible SATA HDD List 135

Appendix F Limited Warranty 135

Welcome

Thank you for purchasing our DVR!
This operating manual is designed to be a reference tool for the installation and operation of your system.
Here you can find information about this series DVR features and functions, as well as a detailed menu tree.
Before installation and operation please read the following safeguards and warnings carefully!

Important Safeguard and Warnings

1．Electrical Safety

All installation and operation here should conform to local electrical safety codes.
We assume no liability or responsibility for all the fires or electrical shock caused by improper handling or installation.

2．Transportation Security

No heavy stress, violent vibration or water splash are allowed during transportation, storage and installation.

3．Installation

Keep upwards. Handle with care.
Do not apply power to the DVR before completing installation.
Do not drop objects on the DVR

4．Qualified Engineers Needed

All the examination and repair work should be done by the qualified service engineers.
We are not liable for any problems caused by unauthorized modifications or attempted repair.

5．Environment

The DVR should be installed in a cool, dry place away from direct sunlight, inflammable, explosive substances and etc.

6. Accessories

Be sure to use all the accessories recommended by manufacturer.
Before installation, please open the package and check all the components listed below are included:

- One power cable
- One Ethernet cable
- A package of installation fittings
- DVR user’s manual (softcopy – on the accompanying CD)
- One CD
- One mouse

Contact your local retailer ASAP if something is missing in your package.

1 Features and Specifications

1.1 Features

This series DVR has the following features:

- H.264 compression algorithm ideal for standalone DVR
- Real-time live display up to 4 cameras, 100/120 fps recording for 4CIF
- Pentaplex function: live, recording, playback, backup & remote access
- 2 HDDs supported & CD-RW/DVD-RW supported
- Video files are stored in the HDD and backed up by the burner simultaneously
- Picture in picture live viewing as well as playback
- CD-RW/DVD-RW automatically switch and CD/DVD change promotion
- Forensic information input &display during playback and data encryption for police use
- Multiple control methods: IR remote control, keyboard, USB mouse and network keyboard.
- Smart video detection: motion detection, camera masking, video loss.
- Smart camera settings: privacy masking, camera lock, color setting, and title display
- Pan Tilt Zoom and Speed Dome Control: more than 60 protocols supported, preset, scan, auto pan, auto tour, pattern, auxiliary function supported. And with Speed Dome, 3D intelligent positioning function supported.
- 2-channel audio input and bidirectional talk supported
- Easy backup methods: USB devices, CD-RW/DVD-RW & network download
- Alarm triggering screen tips, buzzer, PTZ preset, e-mail, FTP upload.
- Smart HDDs Management: non-working HDD hibernation, HDD faulty alarm, Raid function.
- Powerful network software: built-in web server, EPSS (Enterprise professional surveillance software). Networking access for remote live viewing, recording, playback, setting, system status, event log, e-mail & ftp function.

1.2 Specifications

System

Main Processor	High performance embedded microprocessor
Operating System	Embedded LINUX
System Resources	Pentaplex function: live, recording, playback, backup & remote access
User Interface	GUI, on-screen menu tips.
Control Device	USB mouse, keyboard, IR remote control, network keyboard,.
Input Method	Numeral/Character/Denotation
System Status	HDD status, data stream statistics, log record, BIOS version, on-line user and etc.
Peripheral device	LTM8230C overlay temperature and humidity to current video

Video

Video Input	4-Channel composite video(NTSC/PAL) BNC（1.0VP-P ， 75Ω）
Video Output	1-ch PAL/NTSC，BNC（1.0VP-P ， 75Ω） composite signal 1-ch VGA output Support switch between TV and VGA.
Video Standards	PAL（625Line，50f/s），NTSC（525Line，60f/s）
Video Compression	H.264

Video Resolution

Format	NTSC	PAL
D1(4CIF)	704*480	704 * 576
2CIF	704*240	704*240
CIF	352 *240	352 *288
QCIF	176*120	176*144

Video Recording	PAL 1f/s~25f/s NTSC 1f/s~30f/s
Video Display Split	Full and multiple screen display, 1 / 4 PIP
Tour Display	Support
Image Quality	1~6 level (level 6 is the best)
Privacy Masking	Eight self-defined four-sided zones for privacy masking for each camera
Camera Lock	Camera locked for users
Camera Adjustment	Adjust color according to different time period
Video Information	Camera title, time, video loss, camera lock, motion detection, recording
TV Output Adjustment	Adjust TV output color & display zone

Audio

Audio Input	2-channel input 200-1000mv 1KΩ(BNC) The first channel shall short circuit with the pickup. Active pickup (active Vpp=2V) MIC audio input (Line in)
Audio Output	1-channel output, 200-2000mv 4Ω(BNC) Local speaker output/earphone output
Audio Compression	ADPCM

Video Detection & Alarm

Motion Detection	PAL: 22X18/NTSC: 22X15 detection zones Sensitivity: 1~6 (level 6 is highest) Trigger recording, PTZ movement, tour, alarm, e-mail & FTP
Video Loss	Trigger recording, PTZ movement, tour, alarm, e-mail & FTP
Camera masking	Trigger recording, PTZ movement, tour, alarm, e-mail & FTP
Alarm Input	4-channel, programmable, ground, manual open/closed

	Trigger recording, PTZ movement, tour, alarm, e-mail & FTP
Relay output	3-channel including one controllable +12V (do not need to connect external +12V), 30VDC, 1A, 125VAC, 0.5A (activation output)

Hard Disk

Hard Disk	2 SATA ports 2 HDDs supported.
Space Occupation	Audio ：ADPCM28.8MB/H Video ：56～900MB/H
HDD Management	Hard disk hibernation technology, HDD faulty alarm & Raid (Redundancy)

Record, Playback & Backup

Recording Mode	Manual, continuous, video detection (including motion detection, camera masking, video loss), Alarm
Recording Priority	Manual >Alarm >Video Detection >Continuous.
Recording Interval	1 to 120 minutes (default: 60 minutes)
Overwrite Mode	Support
Raid Function	Support
Search Mode	Time/Date, Alarm, Motion Detection & exact search (accurate to second)
Playback	2-channel playback simultaneously. PIP play, pause, stop, rewind, fast play, slow play, next file, previous file, next camera, previous camera, full screen, repeat, shuffle, backup selection.
Digital Zoom	Selected zone can zoom into full screen during playback
Backup Mode	Flash disk/ USB HDD/ USB CD-RW/DVD-RW/ network download

Network

Interface	RJ-45 Port (10/100M)
Network Functions	TCP/IP, DHCP, DDNS, PPPoE, E-mail, FTP
Remote operation	Monitor, PTZ control, playback, system setting, file download, log information

Auxiliary Interface

USB Interface	2 ports, 1 for mouse control, 1 for backup.
RS232	Keyboard, PC communication
RS485	PTZ control

Environmental

Power Supply	220V+10% 50+10%Hz / 110V 60Hz
Power Consumption	27W (excluding HDD)
Working Temperature	0℃~ + 55℃
Working Humidity	10%~90%
Atmosphere Pressure	86kpa~106kpa
Dimension	360mmx275mmx132mm (W*D*H)
Weight	6.5 KG
Mounting	Desktop or rack

1.3 Special Features

- Time information overlay, channel information overlay, temperature and humidity information overlay

Time information is on the top right corner by default. Channel information is on left down corner by default. Temperature and humidity information is on top left corner by default. Time information position and channel information position can be modified. Please note, before you overlaying temperature and humidity information, please go to pan/tilt zoom setup interface. Then set as: LTM8230C, baudrate: 9600, data bit: 7 and stop bit: 2. finally, input corresponding address.

- Good audio effect

System adopts ADPCM compression algorithm. It can lower the noise and enhance definition

- Preview PIP

Support PIP(picture in picture) function so that you can view the specified position in detail and at the same time observe the whole situation.

- Real-time backup

System supports synchronization backup, alternative backup and circle backup.
You can backup current monitor data to the specified DVD (one or several DVDs) and at the same time the specified channel can be memorized in PIP mode.

- ✧ Synchronization backup: The specified device can burn the same data at the same time.
- ✧ Alternative backup: system support several burners to backup in turn. You can insert the newt CD to continue backup once the current one is full. Please note to guarantee there is no data loss between these two CDs, please make sure current record function is normal.
- ✧ Circle backup: This function is based on alternative backup. When the first CD is full, burner pop up the CD and you can input a new one. Once the alternative backup is full, system goes back to the first CD to begin burning.

- Switch CD function

When the CD free space reaches a threshold, system can alarm you. (You can specify a value here. Minimum value is 50M) After you insert the new CD, system reads the previous three to five minutes data to current CD and then start burning. Please note during the whole process, you need to make sure manual record is working properly and record is successfully.

- CD playback

You can use this function to verify the real-time burning data or backup data. System supports CD playback only. For burning or backup operation, if you have selected multiple channels manually, playback operation is distinguished by channel and the image is the video effect of one specified channel. Sometimes, the specified channel is a PIP mode.

- Title information

To burn the necessary case information, you can set case information via client-end and then send it to the DVR. System can display the title information first and then playback the data.

- PC playback

The burned CD can playback in any PC (support PIP mode). System supports channel switch and watermark search. Please note you need to burn the CD player in current CD. If you have selected multiple channels manually and the playback is in PIP mode, when you play the burning or backup CD you can see system automatically overlays all these channels together and play in PIP mode.

- Data encryption

You need to input password to begin CD playback if you have input password when burning.

System also support switch encryption data to current popular storage format such as *.WMV、*.AVI、*.ASF、*.MPEG、*.MOV、*.RM so that you can edit the audio if necessary.

2 Overview and Controls

This section provides information about front panel and rear panel. When you install this series DVR for the first time, please refer to this part first.

2.1 Front Panel

Front panel is shown as in Figure 2-1.

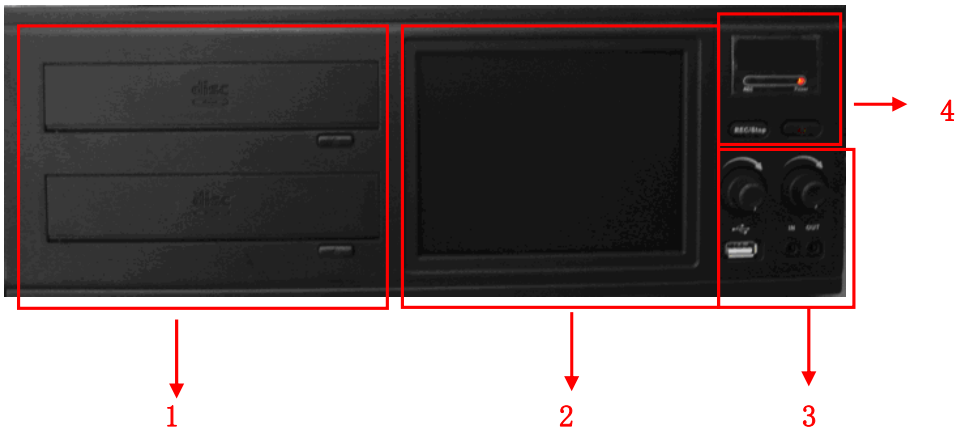


Figure 2-1

1	Burner
2	LCD
3	input/output volume USB port IN：audio talk input OUT：earphone output
4	Burning indication light Power indication light Burner/stop button Power button.

2.2 Rear Panel

This series DVR real panel is shown as in Figure 2-2.

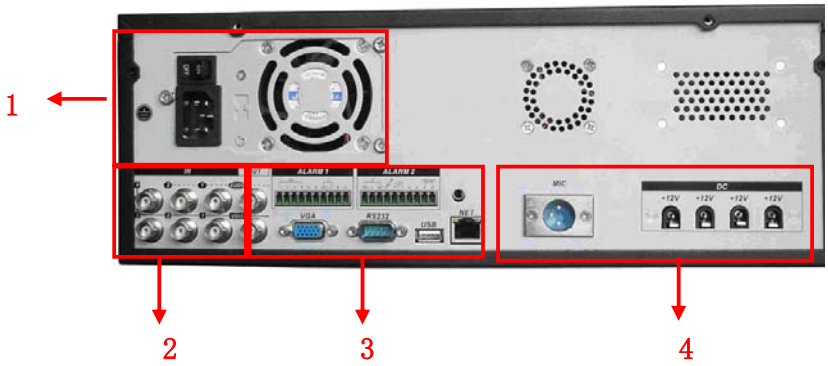


Figure 2-2

1	Power button Power socket Fan
2	AUDIO OUT AUDIO IN VEDIO OUT VEDIO IN
3	Alarm-RS485 port RS232 port VGA port USB port NET port (RJ45)
4	Pickup port Four 12V power sockets

2.3 Remote Control

The remote control interface is shown as in Figure 2-3.

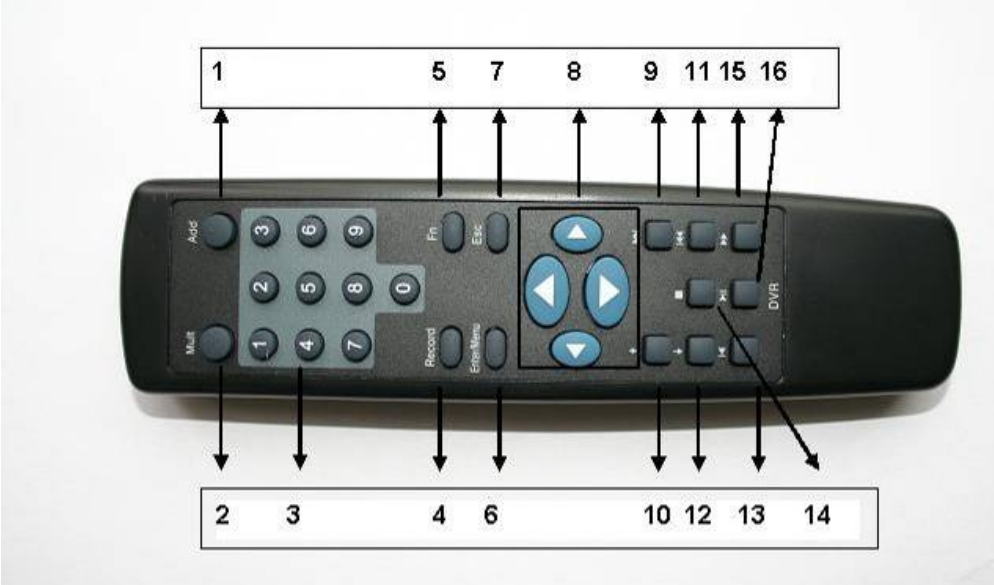


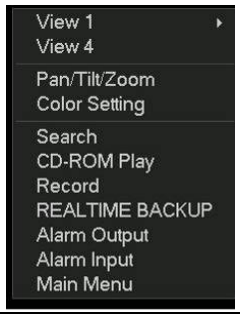
Figure 2-3

Serial Number	Function
1	Remote switch
2	Multiple-window switch
3	0-9 number key
4	Record
5	Auxiliary key
6	Confirm /menu key
7	Cancel
8	Direction key
9	Forward
10	Previous

11	Back
12	Next
13	Slow play
14	Stop
15	Fast play
16	Play/Pause

2.4 Mouse Control

Left click mouse	System pops up password input dialogue box if you have not logged in. In real-time monitor mode, you can go to the main menu.
	When you have selected one menu item, left click mouse to view menu content.
	Implement the control operation.
	Modify checkbox or motion detection status.
	Click combo box to pop up drop down list
	In input box, you can select input methods. Left click the corresponding button on the panel you can input numeral/English character (small/capitalized). Here ← stands for backspace button. __ stands for space button. In English input mode: _stands for input a backspace icon and ← stands for deleting the previous character. In numeral input mode: _ stands for clear and ← stands for deleting the previous numeral. When input special sign, you can click corresponding numeral in the front panel to input. For example, click numeral 1 you can input"/" , or you can click the numeral in the on-screen keyboard directly.
Double left click mouse	Implement special control operation such as double click one item in the file list to playback the video.
	In multiple-window mode, double left click one channel to view in full-window. Double left click current video again to go back to previous multiple-window mode.

Right click mouse	In real-time monitor mode, pops up shortcut menu: one-window, four-window, Pan/Tilt/Zoom, color setting, search, record, alarm input, alarm output, main menu. Among which, Pan/Tilt/Zoom and color setting applies for current selected channel. If you are in multiple-window mode, system automatically switches to the corresponding channel. 
	Exit current menu without saving the modification.
Press middle button	In numeral input box: Increase or decrease numeral value.
	Switch the items in the check box.
	Page up or page down
Move mouse	Select current control or move control
Drag mouse	Select motion detection zone
	Select privacy mask zone.

2.5 Virtual Keyboard

The system supports two input methods: numeral input and English character (small and capitalized) input.

Move the cursor to the text column, the text is shown as blue, input button pops up on the right. Click that button to switch between numeral input and English input (capitalized and small), Use > or < to shift between small character and capitalized character.

3 Installation and Connections

Note: All the installation and operations here should conform to your local electric safety code.

3.1 Check Unpacked DVR

When you receive the DVR from the shipping agency, please check whether there is any visible damage to the DVR appearance. The protective materials used for the package of the DVR can protect most accidental clashes during transportation. Then you can open the box to check the accessories.
Please check the items in accordance with the list on the warranty card. Finally you can remove the protective film of the DVR.

3.2 HDD Installation

3.2.1 Choose HDDs

We recommend Seagate HDD of 7200rpm or higher.

3.2.2 Calculate HDD Size

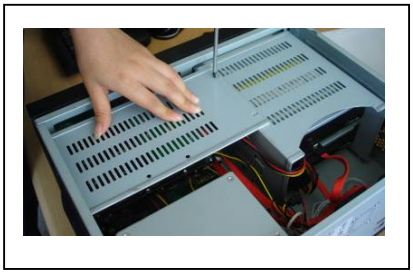
This series have no limit to HDD capacity. You can use 120G-750G HDD to guarantee higher stability.
The formula of total HDD size is:
Total Capacity (MB) = Camera Amount * Recording Hours * HDD Usage Per Hour (M/h)
H.264 compression is ideal for standalone DVRs. It can save more than 30% HDD capacity than MPEG4. When you calculate the total HD capacity, you should estimate the average HDD capacity per hour for each channel.
For example, for a 4-ch DVR, the average capacity of HDD usage per hour per channel is 200M/h. Now if you hope the DVR can record the video 12 hours each day for 30 days, the total capacity of HDDs needed is: 4 channels * 30 days * 12 hours * 200 M/h = 288G. So you need to install one 300G HDD or 2*160G HDDs.

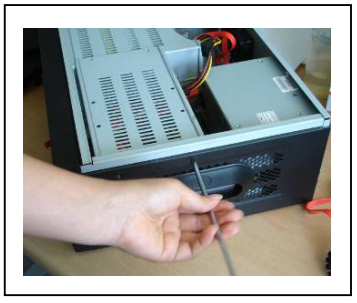
3.2.3 HDD Installation

Data ribbons, fastening screws and smart HDD shelf design are already provided in the accessories.

1. Fix the HDD on the bracket.

2. Connet power and data cable.





3. Fix the HDD bracket on the top. 4.Fix the bracket on the side.

After HDD installation, please check data ribbon connection and power cord.

3.3 CD/DVD Burner Installation

For built-in burner, you can dismantle front plate to install CD burner. This built-in burner should be set as MASTER.
For USB burners, you need to install USB series burner.
This series DVR is compatible with various burner brands popular in today's market.
You can consult our local technical support or visit our website for more information.

3.4 Desktop and Rack Mounting

3.4.1 Desktop Mounting

To prevent surface damage, please make sure that the rubber feet are securely installed on the four corners of the bottom of the unit.
Position the unit to allow for cable and power cord clearance at the rear of the unit. Be sure that the air flow around the unit is not obstructed.

3.4.2 Rack Mounting

The DVR occupies two rack units of vertical rack space.
The hardware necessary to mount the DVR into a rack is supplied with the unit.
Install the cabinet in ventilated place. Avoid extreme heat, humid or dusty conditions.
You can use a soft dry brush to clean opening outlet, cooling fan and etc regularly.

3.5 Connecting Power Supply

Please check input voltage and device power button match or not.
We recommend you use UPS to guarantee steady operation, DVR life span, and other peripheral equipments operation such as cameras.

3.6 Connecting Video Input and Output Devices

3.6.1 Connecting Video Input

The DVR automatically detects the video standard PAL or NTSC BNC（$1.0V_{P-P}$，75Ω）, whenever you connect a video input. It accepts both color and black-and-white and analog video.
NOTE:

- Enabling line lock on cameras may cause video distortion. There may be noise in the camera's power source. If video from one or more cameras is distorted, we recommend you disable line lock on the camera as your first troubleshooting step.
- If a video distribution amplifier is installed between the video source and the DVR, do not set the output video level above 1 Vp-p.

To connect each video input:
1. Connect a coaxial cable to the camera or other analog video source.
2. Connect the coaxial cable to the video in connector on the rear panel.
Please refer to Figure 3-1 for more information.

NOTE:
You need to use a BNC installation tool to connect coaxial cables to the rear panel.

Figure 3-1

3.6.2 Connecting Video Output

This section provides information about physically connecting video display devices to the DVR. See Figure 3-2.
There are BNC(PAL/NTSC BNC（1.0VP-P， 75Ω) output and VGA output.
If you connect the DVR with a TV monitor or VGA monitor, the DVR can automatically detects the monitor type. And without any output device, by default, the DVR is configured to use a TV monitor. In this case, if your application requires a VGA monitor, you have to press the button "FN" or Shift on the front panel.
NOTE:
Video output 1 and VGA can't display at the same time. But Video output 2 can display properly with Video Output 1 or VGA.

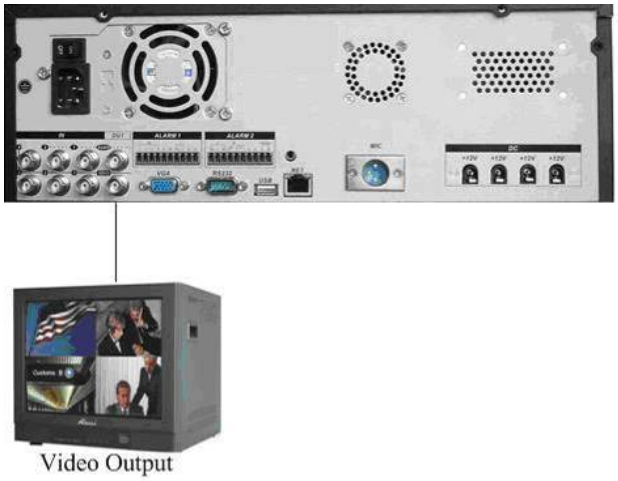


Figure 3-2

3.7 Connecting Audio Input & Output, Bidirectional Audio, Looping Video

3.7.1 Audio Input/One Audio Output

Audio input, bidirectional audio input and audio output
The DVR encodes audio and video signals simultaneously, which lets you control audio at the monitored location.
The audio input adopts BNS port connection. The audio output signal is Line Out, 2Vpp 4 Ω (BNC or RCA). It can connect to earphone (low resistance), sound box or use amplifier to driver other audio output device.
To set up audio:
1. Make sure your audio input device matches the RCA input level. If the device and RCA input levels do not match, audio distortion problems may occur.
2. Make sure the audio connector is wired as follows:
3. Connect a line input device or pre-amplified microphone to the audio connector for the video channel on the rear panel.
Please refer to Figure 3-3.

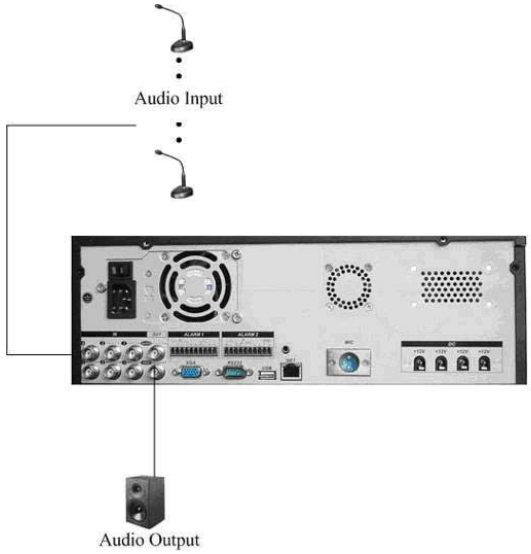


Figure 3-3

3.7.2 Alarm Input and Relay Output

The DVR offers 4 alarm inputs for external signaling devices, such as door contacts or motion detectors. Each alarm input can be either normally open or normally closed. Once configured, an alarm input can invoke many different activities, including triggering a relay device, sending an alert to a security office or storing pre-alarm video to the DVR.

3.7.3 Alarm Input

You should check your alarm input mode is grounding alarm input or not.
For this series DVR, grounding signal is needed for alarm input.
If you need to connect two units or one DVR and other device, please use a relay to separate them.
Please refer to Figure 3-4 for more information.

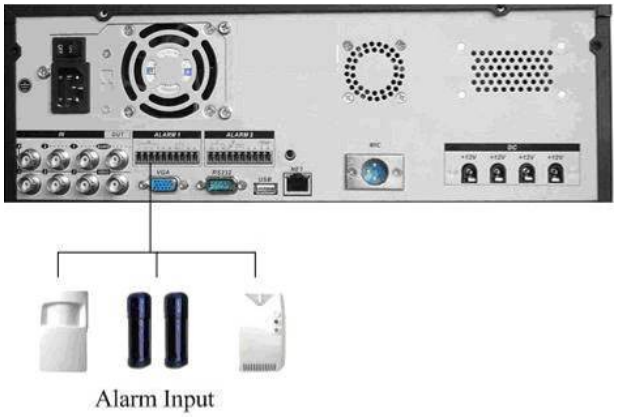


Figure 3-4

3.7.4 Alarm Output

Do not connect alarm output port directly with high power load (no more than 1 A) in case of heavy current.

You can use the co-contactor to realize the connection between the alarm output port and the load.

Please refer to Figure 3-5 for more information.

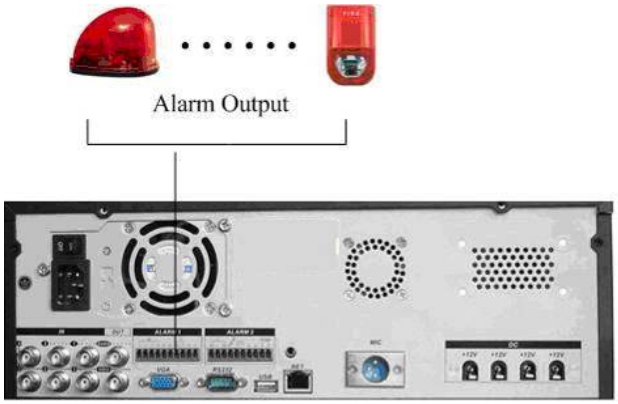


Figure 3-5

3.7.5 Alarm Input and Output Details

Please note this series product adopts ground alarm: When alarm circuit connects to ground you can activate an alarm.

Alarm input and alarm output description：

a) In alarm 1, from the left to the right are alarm1 to alarm 4 respectively. The alarm becomes activated in low voltage.

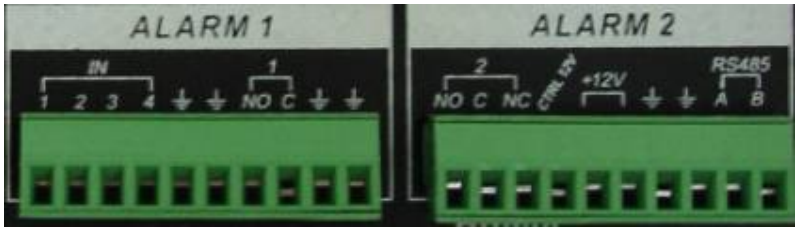
b) In alarm1, 1-No c is normal open activation output. In alarm 2, 2-NO C NC is a group of normal close activation output.

c) +12V is external alarm input. Here needs an external device to provide +12V power. The alarm device power shall be less than 1A,

d) A.B is A/B cable to control 485 device. You can connect to control decoder and

etc. You need to use a 120Ohm resistance between A/B cable if there are too many PTZ decoder.

e) "⏚": ground cable;



You can refer to the following sheet and Figure 3-6 for alarm input and output information.

Parameter	**Grounding Alarm**
Ground	Ground line
Alarm Input	1, 2, …,4
Relay Output	1,2,3,4: NO and C(Normally Open and Com)
	5: NO,C and NC(Normally Open, Com, Normally Closed)
	6: Ctrl 12V(This is used for reset the senor)
485 A、B	485 communication port. They are used to control devices such as PTZ.
+12（C）	This should input an external power input.

- 4-ch grounding alarm inputs. (Normal open or Normal close type)
- Please parallel connect COM end and GND end of the alarm detector (Provide external power to the alarm detector).
- Please parallel connect the Ground of the DVR and the ground of the alarm detector.
- Please connect the NC port of the alarm sensor to the DVR alarm input(ALARM)
- If you need to reset the touched-off alarm remotely, you can use DVR to supply controllable 12 V power to the alarm detector such as the smoke detector.
- Use the same ground with that of DVR if you use external power to the alarm device.

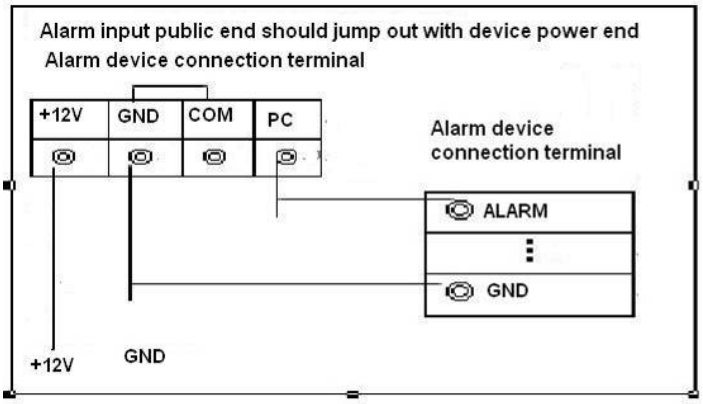


Figure 3-6

3.7.6 Relay Output Description

- 3 ways relay alarm output. Provide external power to external alarm device.
- To avoid over loading, please read the following relay parameters sheet carefully. (See below table)
- The controllable +12v can be used to restore the smoke detector.

Please refer to Figure 3-7 for alarm input module information.

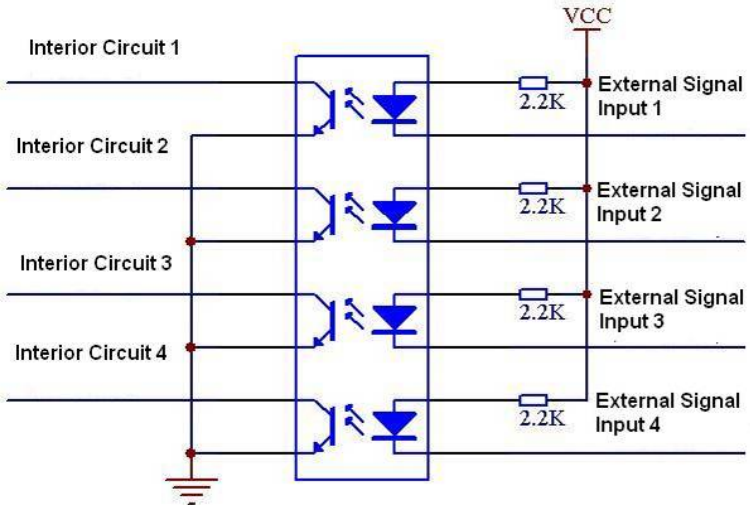


Figure 3-7

Please refer to Figure 3-8 for alarm output module information.

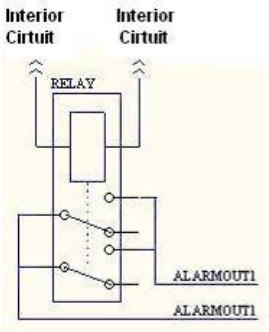


Figure 3-8

Relay Specification

Model:	**JRC-27F**	
Material of the touch	Silver	
Rating （resistance load）	Rated switch capacity	30VDC 2A, 125VAC 1A
	Maximum switch power	125VA 160W
	Maximum switch voltage	250VAC, 220VDC
	Maximum switch currency	1A
Insulation	between touches with same polarity	1000VAC 1minute
	between touches with different polarity	1000VAC 1minute
	between touch and winding	1000VAC 1minute
Surge voltage	between touches with same polarity	1500V (10×160us)
Length of open time	3ms max	
Length of close time	3ms max	
Longevity	Mechanical	50×106 times (3Hz)
	Electrical	200×103 times (0.5Hz)
Temperature	-40□ ~+70□	

3.8 RS232

You can connect the DVR with POS or Keyboard through RS232.
With POS system, the DVR can communicate through RS232 and network. For the POS system, the DVR can integrate the text content and even search the record through the info.
The series DVR also support NKB operation. You can operate the DVR from the keyboard controls instead of using the control pad on the front panel of the unit.
To connect a NKB keyboard to the DVR:
1. Assemble the KBD keyboard according to the instructions in its accompanying installation manual.

2. Connect the KBD keyboard into one of the RS232 ports on the DVR or through network.

3.9 RS485

When the DVR receives a camera control command, it transmits that command up the coaxial cable to the PTZ device. RS485 is a single-direction protocol; the PTZ device can't return any data to the unit. To enable the operation, connect the PTZ device to the RS485(A,B) input on the DVR. Since RS485 is disabled by default for each camera, you need to enable the PTZ settings first. This series DVRs support multiple protocols such as Pelco-D, Pelco-P.

To connect PTZ devices to the DVR:

1. Connect RS485 A,B on the DVR rear panel.
2. Connect the other end of the cable to the proper pins in the connector on the camera.
3. Follow the instructions for configuring a camera to enable each PTZ device on the DVR.

3.10 Other Interfaces

There are still other interfaces on the DVR, such as USB ports. You can refer to the Figure 3-9 for more information.

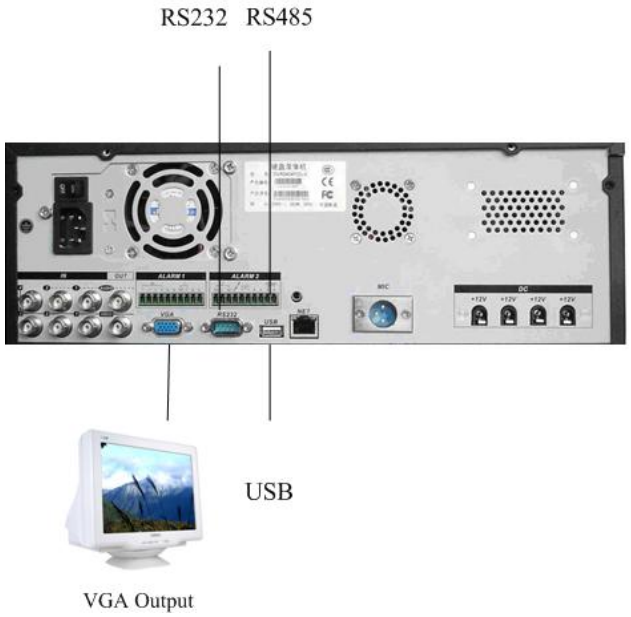


Figure 3-9

4 Overview of Navigation and Controls

Before operation, please make sure you have properly installed HDD and all the cable connections are right.

4.1 Login, Logout & Main Menu

4.1.1 Login

When system boots up, default video output is in multiple-window mode.
Click Enter or left click mouse, you can see the login interface. See Figure 4-1.
System consists of four accounts:

- **Username**: admin. **Password**: admin.
- **Username**: 888888. **Password**: 888888
- **Username**: 666666. **Password**: 666666(Lower user who can only monitor, playback, backup and etc.)
- Username: default. Password: default(hidden user)

For security reasons, please modify you password after first login.

Please use remote control to input. Click 123 to switch between numeral, English character (small/capitalized) and denotation.

Note:

Three times login failure in 30 minutes will result in system alarm and five times login failure will result in account lock!

Figure 4-1

4.1.2 Main Menu

After you logged in, the system main menu is shown as below. See Figure 4-2.
There are total six icons: search, information, setting, backup, advanced and shutdown.
Move the cursor to highlight the icon, then double click mouse to enter the next menu.

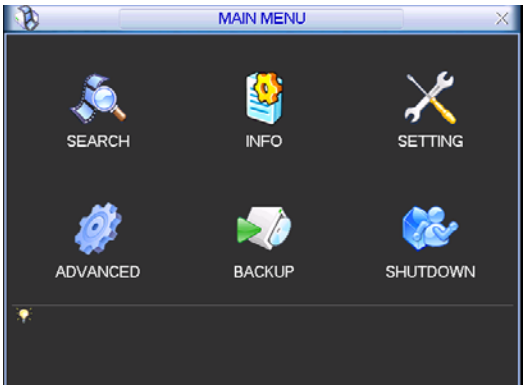


Figure 4-2

4.1.3 Logout

In the main window, click shutdown button, you can see an interface is shown as below. See Figure 4-3.

Figure 4-3

There are several options for you. See Figure 4-4.

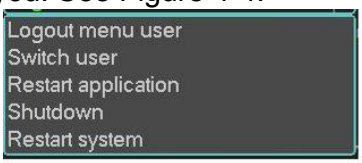


Figure 4-4

Or you can click power button in the front panel for at least three seconds, system will stop all operations. Then you can click the power button in the real panel to turn off the DVR.

4.1.4 Auto Resume after Power Failure

When DVR is in recording, schedule recording or alarm recording mode, system can auto backup video and resume previous working status after power failure.

4.1.5 Replace button battery

Please always use the same type battery and check system time regularly.

We recommend replace battery regularly (such as one-year) to guarantee system time accuracy.

4.2 Recording operation

4.2.1 Live Viewing

When you login, system is in preview mode。 You can see system date, time and channel name.

You can go to general setup to modify these settings (Main Menu->Setting->General).

Please refer to the following sheet for channel information.

1		Recording status	3		Video loss occurred
2		Motion detection status	4		Monitor lock status

Please refer to the following sheet for channel status. stands for opening switch function, stands for closing switch function.

4.2.2 Manual Record

You need to have proper right to implement the following operation.

4.2.2.1 Go to manual record interface

There are two ways for you to go to manual record interface.

- In the main menu, Advanced->Manual Record.
- In preview mode, click record button in the front panel or record button in the remote control.

Manual record interface is shown as in Figure 4-5.

4.2.2.2 Basic operation

Here is for you to set manual record setup.

There are three statuses: schedule/manual/stop. Highlighted icon "○" to select corresponding channel.

- Manual: the highest priority. After manual setup, all selected channels will begin ordinary recording.
- Schedule: channel records as you have set in recording setup (Main Menu->Setting->Scheduled)
- Stop: all channels stop recording.

Note:

These three recording types have the following priority:

Manual>Schedule>Stop.

Figure 4-5

4.2.2.3 Enable/disable record

Please check current channel status: "○" means it is not in recording status, "●" means it is in recording status.

Then use direction key to highlight channel number.

4.2.2.4 Enable all channel recording

Highlight ○ below All, you can enable all channel recording. See Figure 4-6.

- All channel schedule record

Please highlight "ALL" after "Schedule". When system in schedule recording, all channels will records as you have previous set (Main menu->Setting->Schedule). The corresponding indication light in front panel will turn on.

Figure 4-6

- All channel manual record

Please highlight “ALL” after “Manual.” When system in manual recording, all scheduled set up you have set in will be null ((Main menu->Setting->Schedule)). The indicator light in front panel will turn on. See Figure 4-7.

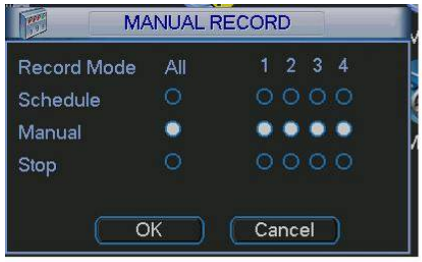


Figure 4-7

4.2.2.5 Stop all channel recording

Please highlight “ALL” after “Stop”. System stops all channel recording no matter what mode you have set in the menu (Main menu->Setting->Schedule) See Figure 4-8.

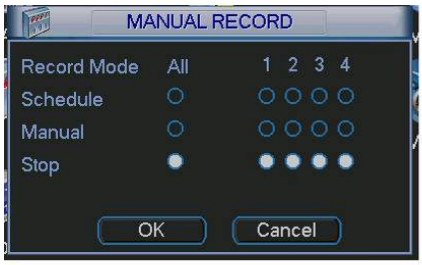


Figure 4-8

4.3 Search & Playback

4.3.1 Search Menu

There are two ways for you to go to search interface.

- Click Pause/play button in the remote control.
- Click search icon in the main menu.

Search interface is shown as below. See Figure 4-9.

There are three file types:

- R: regular recording file.

- A: external alarm recording file.
- M: motion detection recording file

There are two display modes:

1p: one window playback.

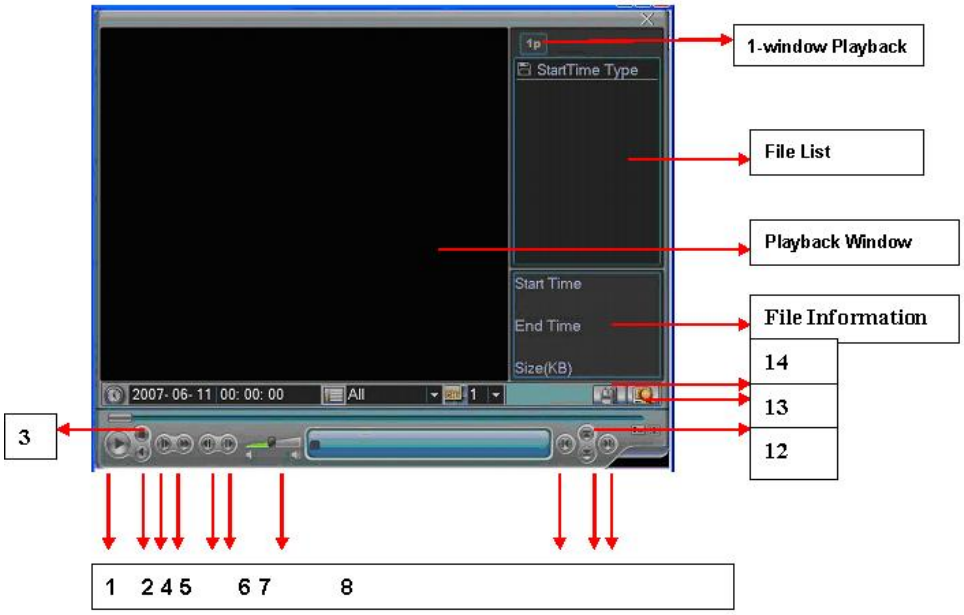


Figure 4-9

Please refer to the following sheet for more information.

Serial number	Function
1	Play
2	Backward
3	Stop
4	Slow play
5	Fast play
6	Previous frame
7	Next frame
8	Volume
9	Previous file

10	Next channel
11	Next file
12	Previous channel
13	Search
14	Backup

4.3.2 Basic Operation

4.3.2.1 Playback

There are various search engines: video type, channel number or time.

System can max display 32 files in one screen. You can use up/down button to turn page.

Select the file name and double click mouse (or click enter button), you can view file content.

4.3.2.2 Accurate playback

Input time (h/m/s) in the time column and then click playback button, system can operate accurate playback.

4.3.2.3 Synchronization playback function when playback

During playback process, click numeral key, system can switch to the corresponding channel video of the same time.

4.3.2.4 Digital zoom

When system in full-screen playback mode, drag your mouse in the screen to select a section and then left click mouse, system operate partial enlargement function, right click mouse to exit.

4.3.2.5 File backup

System supports backup operation during search. You can draw a √ before file name (multiple choices). Then click backup button (Button 14 in Figure 4-9).

4.3.2.6 Slow playback and fast playback

Please refer to the following sheet for slow play and fast playback function.

Button	**Illustration**	**Remarks**
Fast forward when playback：fast forward button ⏩ (Or you can turn the shuttle outer ring clockwise.)	In playback mode, click this button to switch between various fast play modes such as fast play 1 or fast play 2.	Frame rate may vary due to different versions.

Slow play when playback： Slow play button ►	In playback mode, click this button to switch between various slow play modes such as slow play 1 or slow play 2.	
3、Play/Pause⏯	In slow playback mode, click this button to switch between play/pause modes.	
4、Previous/next	In playback mode, you can click ⏮and ⏭ to view previous or next video in current channel.	

4.3.2.7 Fast forward/fast backward and frame by frame playback

Special Functions of Shuttle	**Illustration**	**Remarks**
Fast forward(outer ring clockwise)	When playback, turn the outer ring clockwise one round: you can view in fast speed 1 Turn it two rounds you get fast speed 2. You can continue turning to get different speed.	In forward or backward mode, double click Pause/Play button to get normal playback. Frame rate may vary due to different versions.
Fast backward(outer ring counter clockwise)	When playback, turn the outer ring counter clock-wise one round, you can view in backward speed 1. Turn it two rounds, you get backward speed 2. You can continue turning to get different speed.	
Manual playback frame by frame	In playback mode, click play/pause button, slowly turn the inner dial clock-wise to view frame by frame, counter clock wise to view I frame playback.	

4.3.2.8 Backward playback and frame by frame playback

Button	**Illustration**	**Remarks**
Backward play（ ⏯ in playback interface ）	In normal playback mode, left click backward play button, system begins backward playback. Double click backward play button again, system goes to pause mode.	When system is in backward play or frame by frame playback mode, click play button system goes to

Manual playback frame by frame.	Click pause button in normal playback mode, slowly turn the inner dial clock-wise to view frame by frame, counter clock wise to view I frame playback.	normal playback

4.3.3 Backup in search interface

Draw a ✓ before the checkbox to select the file you want to backup (You can select files in two channels.). And then click backup button (Button 14 in Figure 4-9.)

4.3.4 Calendar

Click calendar icon , system pops up calendar for your reference. Highlighted date means there are video files in that day. You can click blue date to view file list. See Figure 4-10. There are video files in March 13th and 14th. Double click date to view file list.

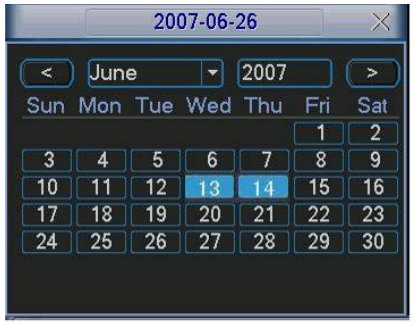


Figure 4-10

4.4 Record setup (Schedule)

In the main menu, from setting to schedule, you can go to schedule menu. See Figure 4-11.
There are three record types: R-Regular, MD-Motion detection, A- Alarm.

SCHEDULE
Channel 1 PreRecord 10 sec. Redundancy
Week Day Mon Record Type Regular MD Alarm
Period 1 00 :00 -08 :00
Period 2 08 :00 -12 :00
Period 3 12 :00 -20 :00
Period 4 00 :00 -24 :00
Period 5 00 :00 -24 :00
Period 6 00 :00 -24 :00
Regular MD Alarm
0 3 6 9 12 15 18 21 24
Copy Paste Default Save Cancel

Figure 4-11

4.4.2 Basic Operation

There are total six periods. See Figure 4-11.

- Channel: Please select the channel number first. You can select "all" if you want to set for the whole channels.
- Week day: There are eight options: ranges from Saturday to Sunday and all.
- Redundancy: System supports redundancy backup function. You can highlight Redundancy button to activate this function. Please note, before enable this function, please set at least one HDD as redundant.(Main menu->Advanced->HDD Management)
- Prerecord: System supports prerecord function. The previous one to three seconds video before alarm occurs can be included in recorded video.
- Record types: There are three types: regular, motion detection (MD) and Alarm.

Please highlight icon to select the corresponding function.

At the bottom of the menu, there are color bars for your reference. Green stands for regular recording, yellow stands for motion detection and red stands for alarm recording.

4.4.1.1 Quick Setup

This function allows you to copy one channel setup to another. After setting in channel 1, you can click paste button and turn to channel 2 and then click copy button. You can finish setting for one channel and then click save button or you can finish all setup and then click save button to memorize all the settings.

4.4.1.2 Redundancy

Redundancy function allows you to memorize record file in several disks. These files are created, packaged and closed simultaneously. When there is file damage occurred in one disk, there is a spare one in the other disk. You can use this function to maintain data reliability and safety.

In the main menu, from Setting to Schedule, you can highlight redundancy button to enable this function. See Figure 4-11.

In the main menu, from Advanced to HDD management, you can set one or more disk(s) as redundant. You can select from the dropdown list. See Figure 4-12.

System auto overwrites old files once hard disk is full.

Please note only read/write disk or read-only disk can backup file and support file search function, so you need to set at least one read-write disk otherwise you can not record video.

Note

About redundancy setup:

- If current channel is not recording, current setup gets activated when the channel begin recording the next time.
- If current channel is recording now, current setup will get activated right away, the current file will be packet and form a file, then system begins recording as you have just set.

After completed all the setups please click save button, system goes back to the previous menu.

Figure 4-12

Playback or search in the redundant disk.

There are two ways for you to playback or search in the redundant disk.

- Set redundant disk(s) as read-only disk or read-write disk (Main menu->Advanced->HDD management). See Figure 4-12.System needs to reboot to get setup activated. Now you can search or playback file in redundant disk.
- Dismantle the disk and play it in another PC.

4.5 Motion Detect

4.5.1 Go to Detect Menu

In the main menu, from Setting to Detect, you can see motion detect interface. See Figure 4-13. There are three detection types: motion detection, video loss, camera masking.

4.5.2 Motion Detect

Detection menu is shown as below. See Figure 4-13.

- Channel: select the channel you want to implement motion detection.
- Event type: from the dropdown list you can select motion detection type.
- Channel: select the channel to activate recording function once alarm occurred. Please make sure you have set MD record in encode interface(Main Menu->Setting->Schedule) and schedule record in manual record interface(Main Menu->Advanced->Manual Record)
- Latch: when motion detection complete, system auto delays detecting for a specified time. The value ranges from 10-300(Unit: second)
- Region: Click select button, the interface is shown as in Figure 4-14.Here you can set motion detection zone. There are 396(PAL)/330(NTSC) small zones.
- Sensitivity: System supports 6 levels. The sixth level has the highest sensitivity.
- Show message: System can pop up a message to alarm you in the local host screen if you enabled this function.
- Send email: System can send out email to alert you when alarm occurs.

- PTZ activation: Here you can set PTZ movement when alarm occurs. Such as go to preset, tour &pattern when there is an alarm. Click “select” button, you can see an interface is shown as in Figure 4-15.
- Period: Click set button, you can see an interface is shown as in Figure 4-16. Here you can set for business day and non-business day. In Figure 4-16, click set button, you can see an interface is shown as in Figure 4-17. Here you can set your own setup for business day and non-business day.
- Anti-dither: Here you can set anti-dither time.
- Sensitivity: there are six levels. The sixth level has the highest sensitivity.
- Alarm output: when alarm occurred, system enables peripheral alarm devices.
- Tour: Here you can enable tour function when alarm occurs. It is a one-window tour. Please go to chapter 5.3.9 Display for tour interval setup.

Please highlight icon to select the corresponding function. After all the setups please click save button, system goes back to the previous menu.

Note:

In motion detection mode, you can not use copy/paste to set channel setup since the video in each channel may not be the same.

In Figure 4-14, you can left click mouse and then drag it to set a region for motion detection. Click Fn to switch between arm/withdraw motion detection. After setting, click enter button to exit.

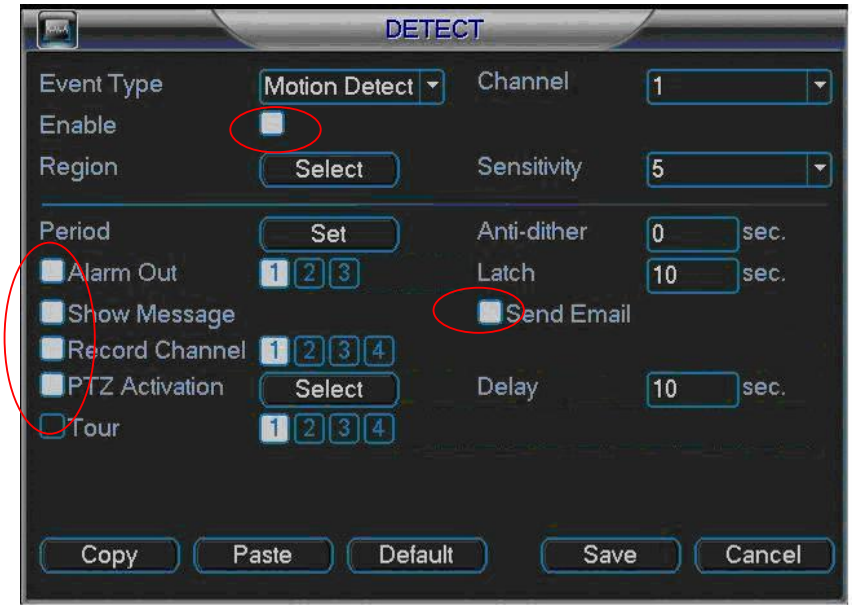


Figure 4-13

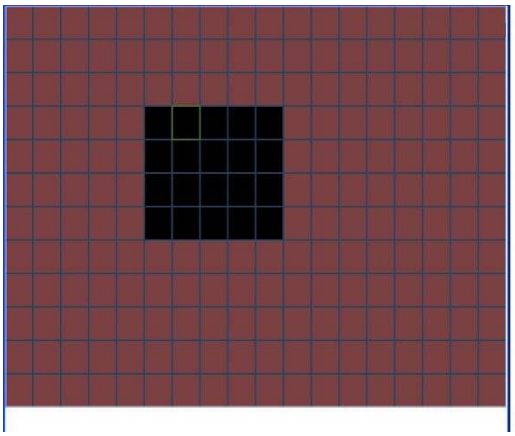


Figure 4-14

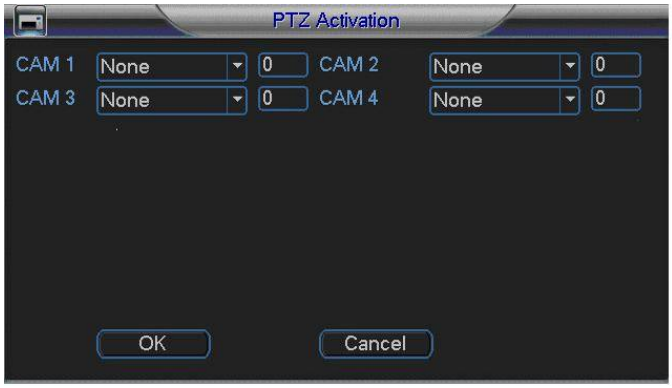


Figure 4-15

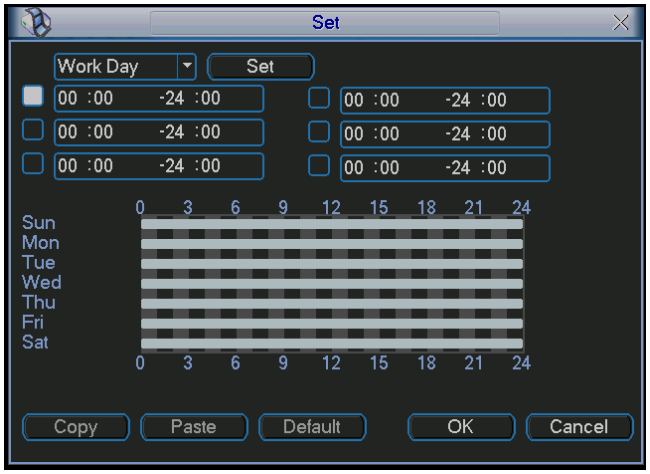


Figure 4-16

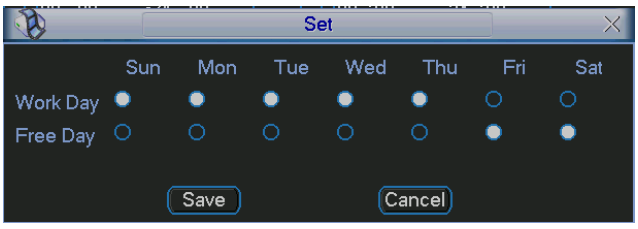


Figure 4-17

4.5.3 Video Loss

In Figure 4-13, select video loss from the type list. You can see the interface is shown as in Figure 4-18.This function allows you to be informed when video loss phenomenon occurred. You can enable alarm output channel and then enable show message function.

- Channel: select the channel you want to enable lens shading alarm.
- Event type: please select video loss.
- Channel: select the channel to record when video loss occurred.
- Alarm output: activate peripheral alarm device when video loss occurred.
- Latch: when motion detection complete, system auto delays detecting for a specified time. The value ranges from 10-300(Unit: second)
- Show message: System can pop up a message to alarm you in the local host screen if you enabled this function.
- Send email: System can send out email to alert you when alarm occurs.
- PTZ activation: Here you can set PTZ movement when alarm occurs. Such as go to preset, tour & pattern when there is an alarm. Click "select" button, you can see an interface is shown as in Figure 4-15.
- Period: Click set button, you can see an interface is shown as in Figure 4-16. Here you can set for business day and non-business day. In Figure 4-16, click set button, you can see an interface is shown as in Figure 4-17. Here you can set your own setup for business day and non-business day.
- Sensitivity: there are six levels. The sixth level has the highest sensitivity.
- Alarm output: when alarm occurred, system enables peripheral alarm devices.
- Tour; Here you can enable tour function when alarm occurs. It is a one-window tour. Please go to chapter 5.3.9 Display for tour interval setup.

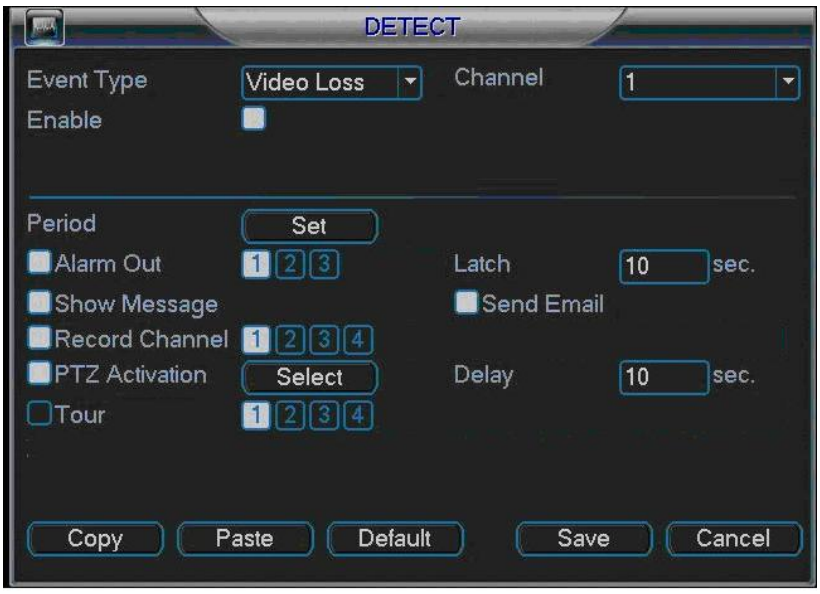


Figure 4-18

4.5.4 Camera Masking

When someone viciously masks lens, the system can alert you to guarantee video continuity. Camera masking interface is shown as in Figure 4-19.

- Channel: select the channel you want to enable camera mask detection function.
- Event type: please select camera mask detect from the dropdown list.
- Channel: select the channel to record when camera mask occurred.
- Alarm output: activate peripheral alarm device when camera mask occurred.
- Enable tour: Here is for you to activate tour between different cameras.
- Latch: when motion detection complete, system auto delays detecting for a specified time. The value ranges from 10-300(Unit: second)
- Show message: System can pop up a message to alarm you in the local host screen if you enabled this function.
- Send email: System can send out email to alert you when alarm occurs.
- PTZ activation: Here you can set PTZ movement when alarm occurs. Such as go to preset, tour &pattern when there is an alarm. Click "select" button, you can see an interface is shown as in Figure 4-15.
- Period: Click set button, you can see an interface is shown as in Figure 4-16. Here you can set for business day and non-business day. In Figure 4-16, click set button, you can see an interface is shown as in Figure 4-17. Here you can set your own setup for business day and non-business day.
- Sensitivity: there are six levels. The six-level has the highest sensitivity.
- Alarm output: when alarm occurred, system enables peripheral alarm devices.
- Tour: Here you can enable tour function when alarm occurs. It is a one-window tour: Please go to chapter 5.3.9 Display for tour interval setup.

Note:

In this interface, copy/paste function is only valid for the same type, which means you can not copy a channel setup in video loss mode to camera masking mode.

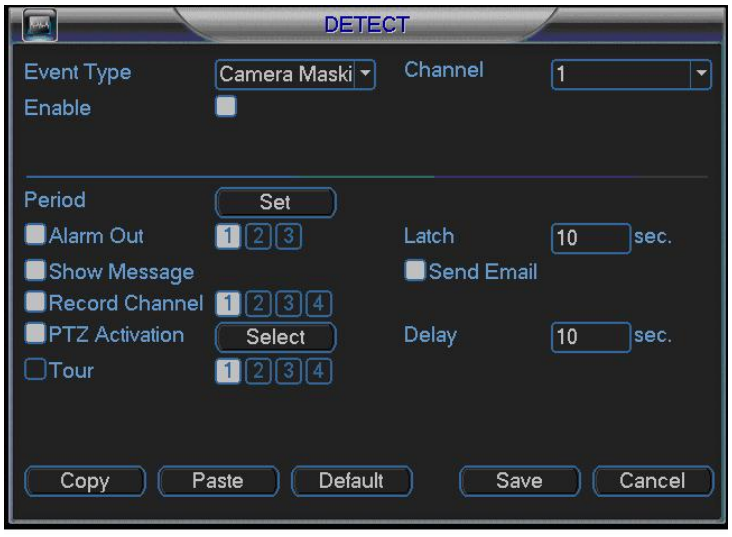


Figure 4-19

4.6 Alarm Setup and Alarm Activation

Before operation, please make sure you have properly connected alarm devices such as buzzer.

4.6.1 Go to alarm setup interface

In the main menu, from Setting to Alarm, you can see alarm setup interface. See Figure 4-20.

4.6.2 Alarm setup

Alarm interface is shown as below. See Figure 4-20.

- Alarm in: here is for you to select channel number.
- Event type: there are two types. One is local input and the other is network input.
- Type: normal open or normal close.
- PTZ activation: Here you can set PTZ movement when alarm occurs. Such as go to preset, tour& pattern when there is an alarm. Click "select" button, you can see an interface is shown as in Figure 4-21.
- Period: Click set button, you can see an interface is shown as in Figure 4-22. Here you can set for business day and non-business day. In Figure 4-22, click set button, you can see an interface is shown as in Figure 4-23. Here you can set your own setup for business day and non-business day.
- Anti-dither: Here you can set anti-dither time.
- Show message: System can pop up a message to alarm you in the local host screen if you enabled this function.
- Send email: System can send out email to alert you when alarm occurs.
- Record channel: you can select proper channel to record alarm video (Multiple choices). At the same time you need to set alarm record in schedule interface (Main Menu->Setting->Schedule) and select schedule record in manual record interface (Main Menu->Advance->Manual Record).
- Latch: Here is for you to set proper delay duration. Value ranges from 10 to 300 seconds. System automatically delays specified seconds in turning off alarm and activated output after external alarm cancelled.
- Tour: Here you can enable tour function when alarm occurs. It is a one-window tour: Please go to chapter 5.3.9 Display for tour interval setup.

Please highlight icon to select the corresponding function. After all the setups please click save button, system goes back to the previous menu.

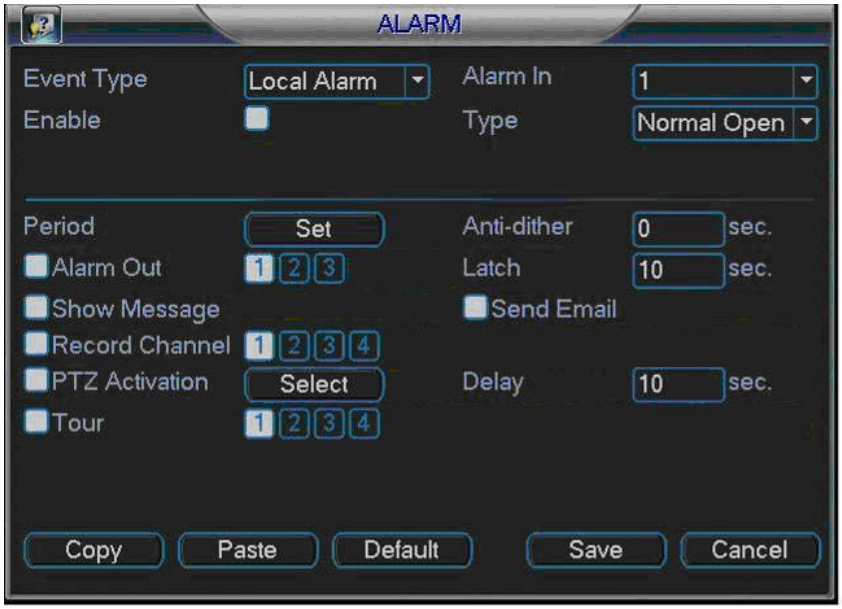


Figure 4-20

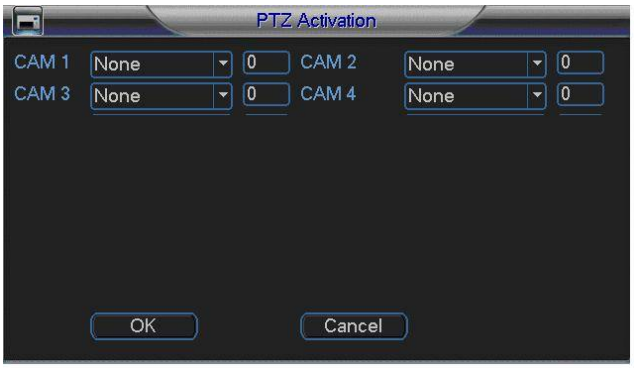


Figure 4-21

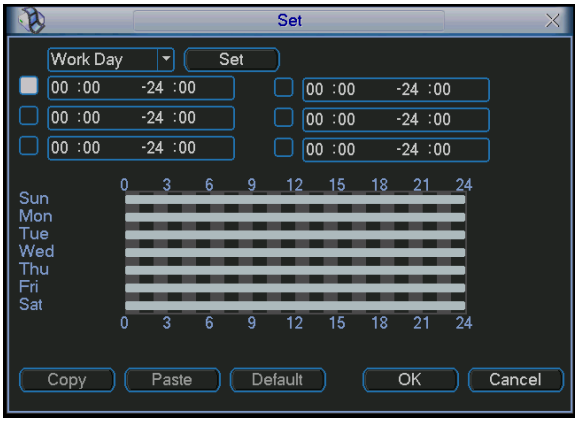


Figure 4-22

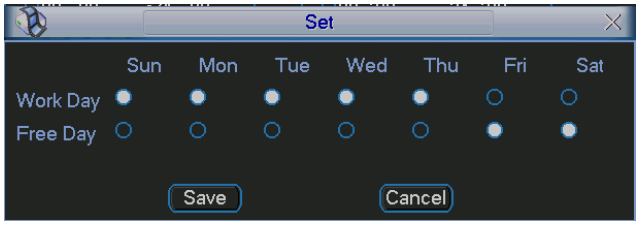


Figure 4-23

4.7 Real-time Backup and Burn

4.7.1 Real-time Backup

Right click mouse, system pops up the following shortcut menu. See Figure 4-24.

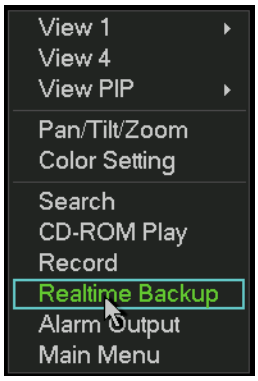


Figure 4-24

Click real-time backup, you can see an interface is shown as in Figure 4-25.

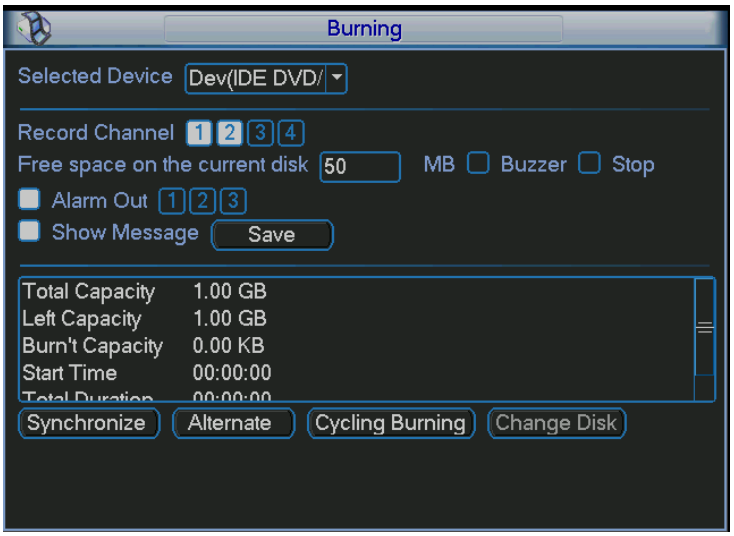


Figure 4-25

You can select device from the dropdown list. System supports CD backup and DVR backup. Usually do not burn in these two types at the same time.

- Record channel: now system max support backup 2 channels at the same time.

- Alarm out: System supports 3 channels.
- Show message: system pops up message in the screen to alert you.
- Synchronize: the selected device burns the same data. Once completes, system auto stop burning. Or you can terminate manually during the burning process.
- Alternative: system begins burning from the first device, then the second device. System repeats the previous process until completing the whole burning process.
- Cycling burning: If you have chose several devices, you can use this function to burn among these devices.
- Change disk: This function allows you to manually change disk. System will burn the last five minutes video of the previous disk into the new disk. Click change disk button, system goes back to device interface. (System auto cancel change disk function if you do not select device to backup after 15 minutes). Click synchronism button to continue burning. During the whole process please make sure record function is proper (Main Menu->Advanced->Manual Record). **Do not** select stop for current backup channel! See Figure 4-26.

Figure 4-26

When you select synchronize burning or alternative burning function, you can view current backup status, at the same time, synchronize (or alternative) button becomes stop button. See Figure 4-27.

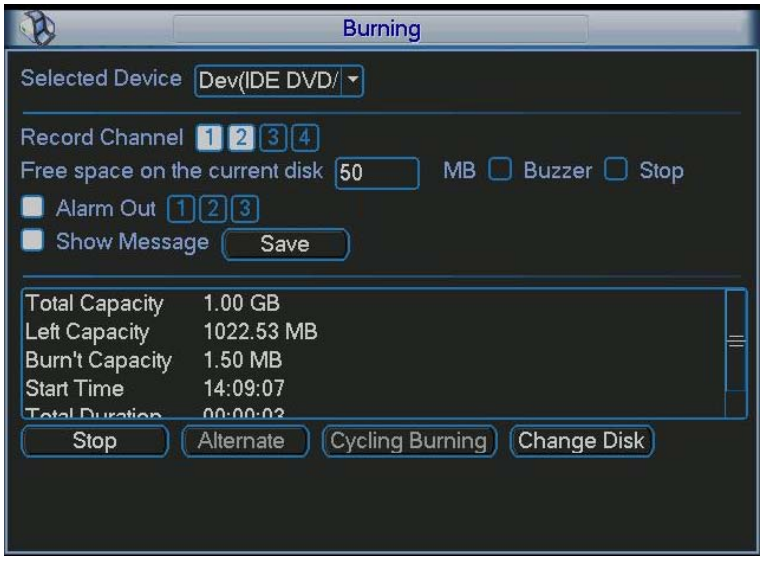


Figure 4-27

During the backup process, you can click stop button to terminate current burning. System pops up warning dialogue box asking you to confirm. See Figure 4-28.

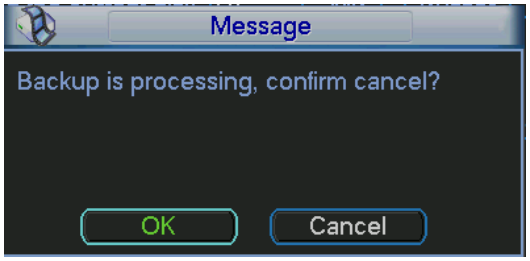


Figure 4-28

You can see the following dialogue box when backup completed. See Figure 4-29.

Figure 4-29

Since DVR file is huge, system can divide it into several files and each file size is 600M (usually the last file is smaller than 600M). System will adjust in accordance with you backup size to facilitate data backup.

Tips:

During the backup process, you can overlay special time title so that you can search easily in the future.

You can also connect DVR alarm in 1 with peripheral device, system will auto overlay time information in corresponding video when alarm occurred.

4.7.2 Backup

You can go to backup interface from the main menu. See Figure 4-30.

Figure 4-30

Click backup button, the interface is shown as in Figure 4-31. Please note current burning is the same as real-time burning. .

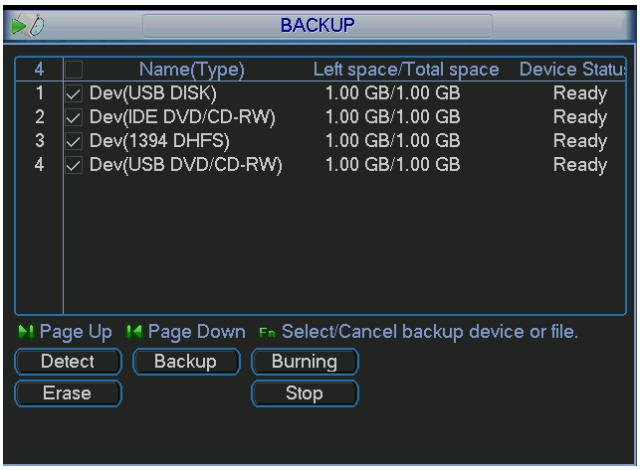


Figure 4-31

In Figure 4-31, click backup button, the interface is shown as in Figure 4-32.

System supports ordinary backup and PIP (Picture in picture).

If you want to enable PIP function, you need to note:

- ✧ Select two different channels
- ✧ These two recorded files start time and end time shall be less than 2 seconds.

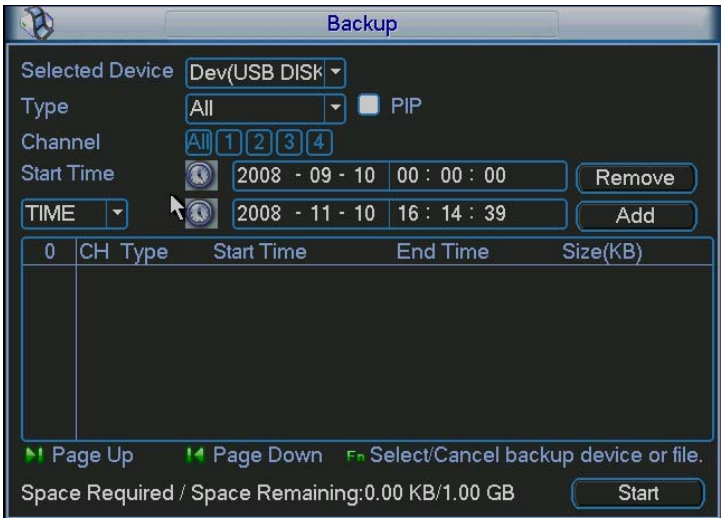


Figure 4-32

Select the device, type, channel number and then input start time and end time in Figure 4-32. Click add button, system auto begins searching files. There is a √ before all matched file names. See Figure 4-33.

You can continue setting time period and click add button to search. All matched files are listed below, you can use page up/down to view.

You can view backup information at the bottom of the interface. Please note system only backup those files that there is a √ before file name.

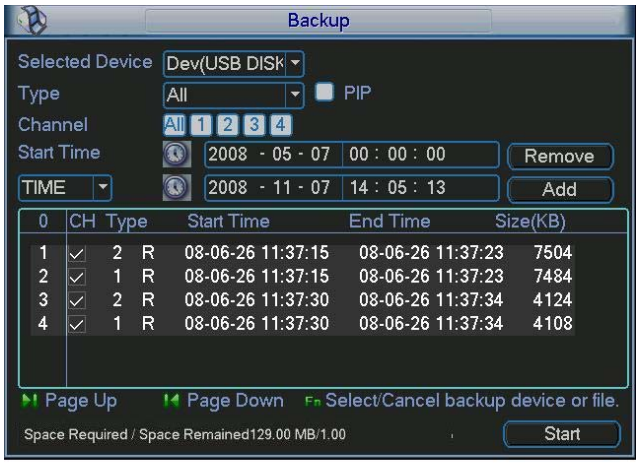


Figure 4-33

Click backup button, system begins burning. At the same time, the backup button becomes stop button. You can view the remaining time and process bar at the left bottom. See Figure 4-34.

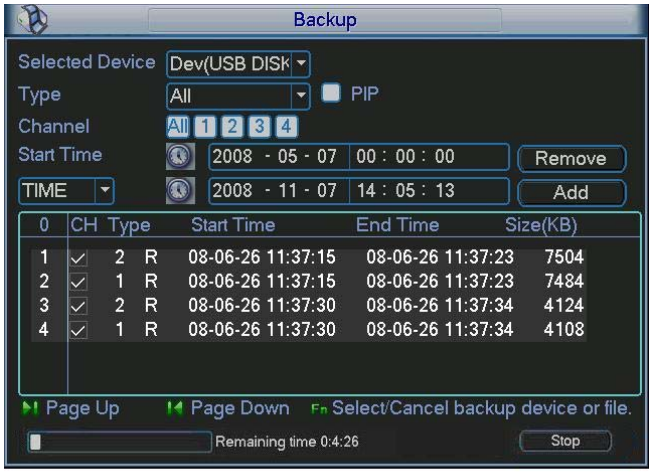


Figure 4-35

When backup completed, you can see the following interface. See Figure 4-36.

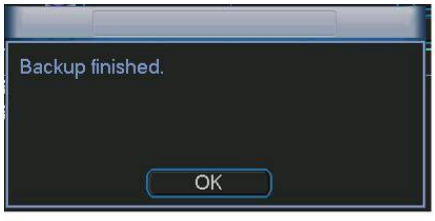


Figure 4-36

Tips:

During backup process, you can click ESC to exit current interface; but system will not terminate backup process.

Note:

When you click stop button during the burning process, there are two conditions for different devices:

- For CD-ROM device, the stop function becomes activated immediately and there is no data in the CD.
- For USB device, system can backup the data before you click stop button. For example, if there is a file of 10 minutes, when you click stop after five minutes backup, system only save the previous 5-minute data in the device.

You can use Fn or cancel button to delete √ after file serial number. The file name format usually is: SN_CH+channel number+time Y+M+D+M+S，among which the YDM format is the same as you set in general interface. (Main Menu ->Setting ->General).

You can visit our website to view listed CD-ROM type.

4.8 CD playback

To verify real-time backup data, this series DVR supports CD playback.

It supports real-time burning data verification and backup data verification.

In Figure 4-24, click CD playback button, you can see an interface is shown as below. See Figure 4-37.

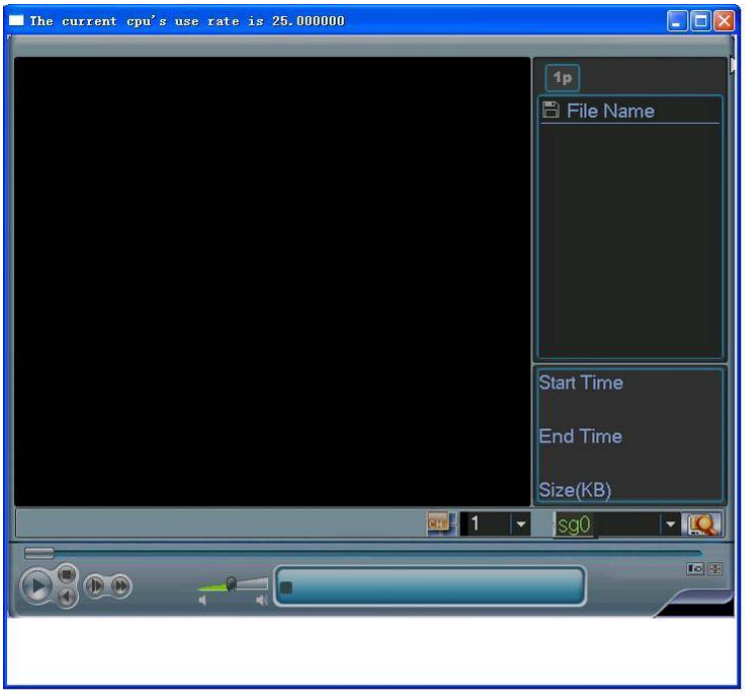


Figure 4-37

Sg0 means it is a CD device. Click search button, you can view file list in current CD. See Figure 4-38.

Double click file name, you can playback current file.

If you select channel 2, system auto playback files in channel 2.

Please note: real-time backup and CD playback are both operations for CD. You can not operate these two functions at the same time.

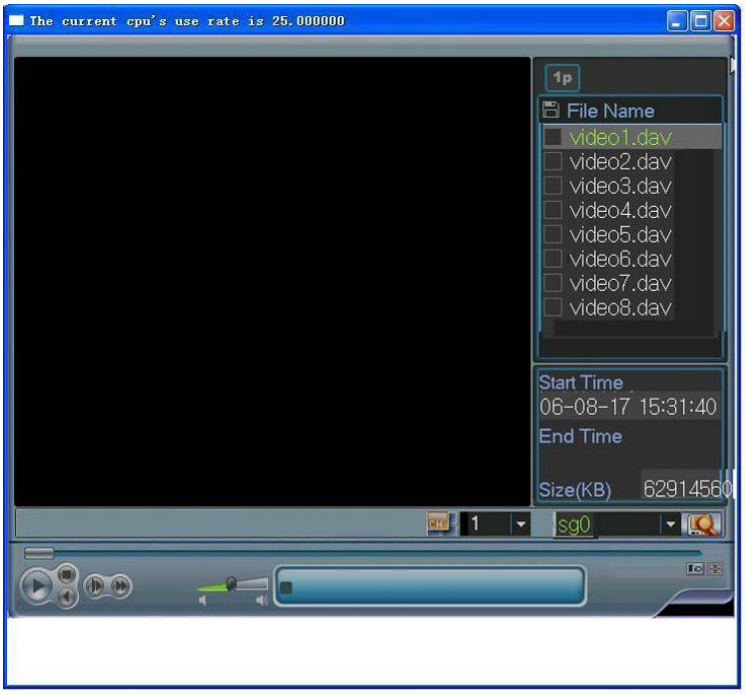


Figure 4-38

4.9 PTZ Control and Color Setup

Note:

All the operation here is based on PELCO protocol.

For PELCO protocol users there might be slightly difference.

4.9.1 Cable Connection

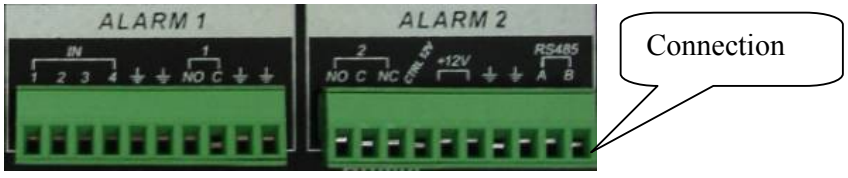


Figure 4-39

Please follow the procedures below to go on cable connection

- Connect the dome RJ 485 port to DVR 485 port. See Figure 4-39.
- Connect dome video output cable to DVR video input port.

- Connect power adapter to the dome.

4.10 PTZ Setup

Note: The camera video should be in the current screen.
Before setup, please check the following connections are right:

- PTZ and decoder connection is right. Decoder address setup is right.
- Decoder A (B) line connects with DVR A (B) line.

Boot up the DVR, input user name and password.
Click system setup, and then click Pan/Tilt control button. The interface is shown as in Figure 4-40. Here you can set the following items:

- Channel: select the current camera channel.
- Protocol: select corresponding PTZ protocol(such as PELCO)
- Address: default address is 1.
- Baud rate: select corresponding baud rate. Default value is 9600.
- Data bits: select corresponding data bits. Default value is 8.
- Stop bits: select corresponding stop bits. Default value is 1.
- Parity: there are three options: odd/even/none. Default setup is none.

Figure 4-40

After completed all the setting please click save button.
In one window display mode, right click mouse (or click “Fn” key in the remote control). The interface is shown as in Figure 4-41.

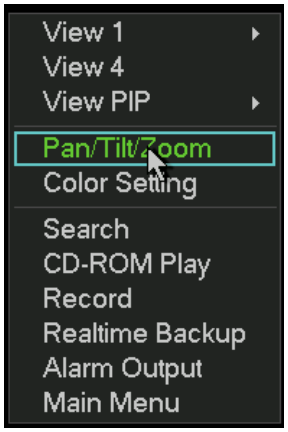


Figure 4-41

Click Pan/Tilt/Zoom, the interface is shown as in Figure 4-42.
Here you can set the following items:

- Zoom
- Focus
- Iris

Click icon and to adjust zoom, focus and Iris.

Figure 4-42

For detailed operation instruction, please refer to chapter 6.

4.11 Temperature/Humidity Overlay

In PTZ interface (main menu→setting→Pan/Tilt/Zoom), you can set as below:

- Protocol: LTM8230C
- Data bit: 7
- Stop bit: 2

Then you can select compounding baud rate and address. LTM8230 support three baud rates: 4800/9600/19200/ default setup is 9600.
Since temperature and humidity device baud rate is set by command, you need to check whether temperature and humidity is connected to the DVR or not first.
Please follow the steps below:
Set one baud rate and then input proper address (the temperature and humidity value) .
Click save button to exit.
Then please go to PTZ setup interface, modify address and then click save button to exit.
Now you can check temperature and humidity address changes or not. If it changes, then current setup is O.K. you have enabled overlay function.
If it does not change, you need to restore previous address and set again.

4.12 Color Setting

In Figure 4-41, highlight color setting item and then left click mouse, you can see an interface is shown as in Figure 4-43. You can set period and then set color. Please note period here are from 00.00 to 24.00.

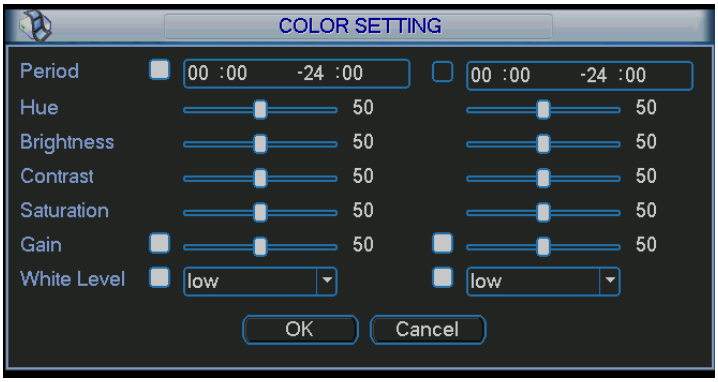
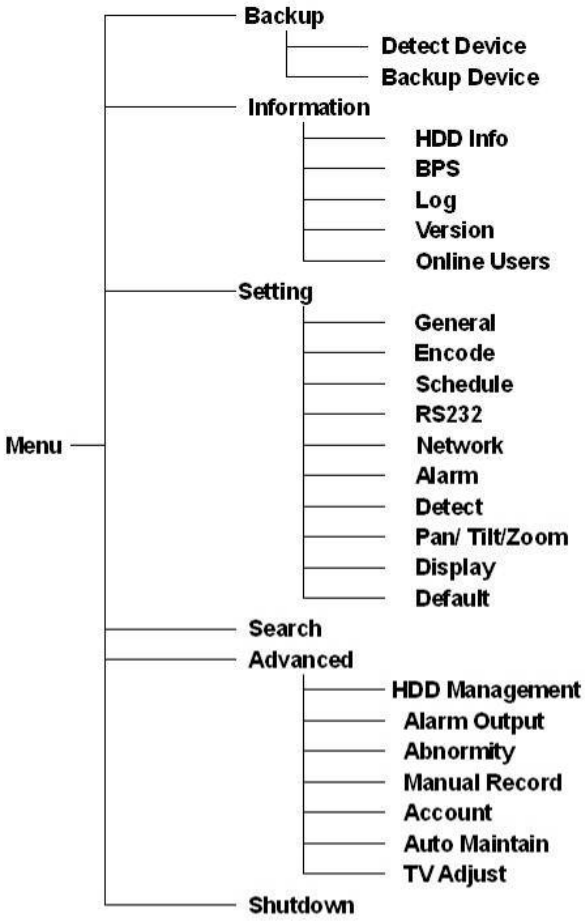

COLOR SETTING
Period
00 :00 -24 :00
00 :00 -24 :00
Hue
50
50
Brightness
50
50
Contrast
50
50
Saturation
50
50
Gain
50
50
White Level
low
low
OK
Cancel

Figure 4-43

5 Understanding of Menu Operations and Controls

5.1 Menu Tree

This series DVR menu tree is shown as below.



5.2 Main Menu

After you logged in, the system main menu is shown as below. See Figure 5-1 . There are total six icons: search, Information, setting, backup, advanced and shutdown. Move the cursor to highlight the icon, then double click mouse to enter the sub-menu.

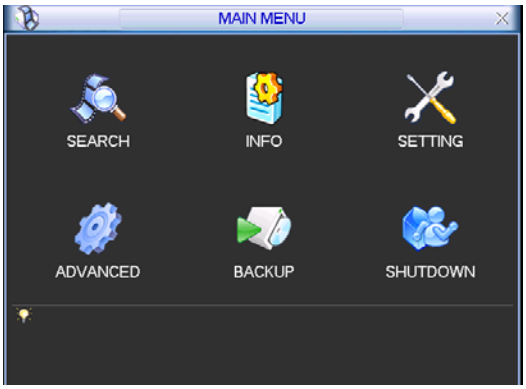


Figure 5-1

5.3 Setting

In main menu, highlight setting icon and double click mouse. System setting interface is shown as below. See Figure 5-2.

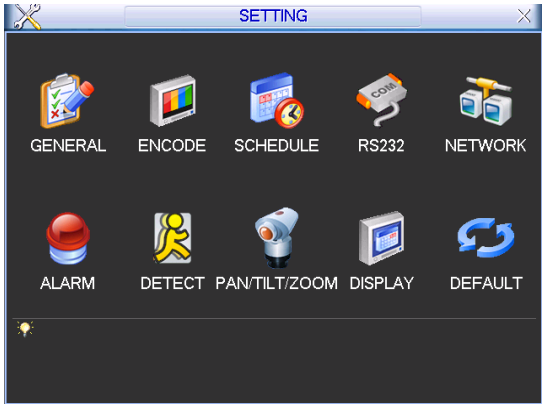


Figure 5-2

5.3.1 General

General setting includes the following items. See Figure 5-3.

- System time: here is for you to set system time
- Date format: there are three types: YYYYY-MM-DD: MM-DD-YYYYY or DD-MM-YYYY.
- Date separator: there are three denotations to separate date: dot, beeline and solidus.
- DST: Here you can set DST time and date. Please enable DST function and then click set button. You can see an interface is shown as in Figure 5-4. Here you can set start time and end time by setting corresponding week setup. In Figure 5-4, enable date button, you can see an interface is shown as in Figure 5-5. Here you can set start time and end time by setting corresponding date setup.
- Time format: there are two types: 24-hour mode or 12-hour mode.
- Language: system supports various languages: Chinese (simplified), Chinese (Traditional), English, Italian, Japanese, French, Spanish (All languages listed here are optional. Slight difference maybe found in various series.)

- HDD full: Here is for you to select working mode when hard disk is full. There are two options: stop recording or rewrite.
- Pack duration: Here is for you to specify record duration. Default value is 60 minutes.
- DVR No: when you are using one remote control to control several DVRs, you can give a name to each DVR for your management.
- Video standard: There are two formats: NTSC and PAL.
- Auto logout: Here is for you to set auto logout interval once login user remains inactive for a specified time. Value ranges from 0 to 60 minutes.

Note:

Since system time is very important, do not modify time casually unless there is a must! After completing all the setups please click save button, system goes back to the previous menu.

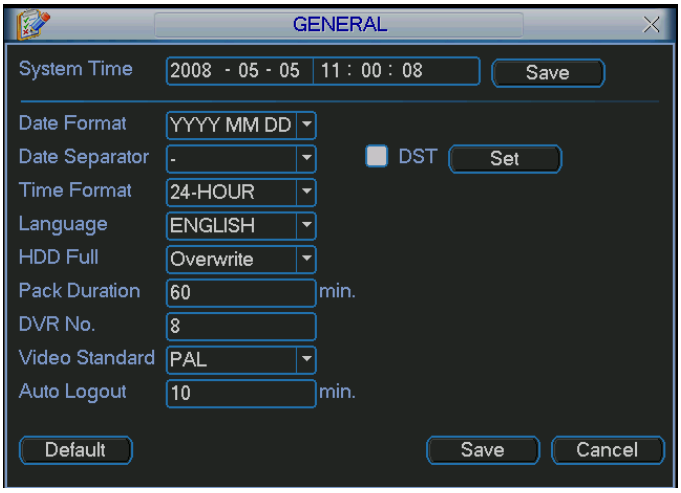


Figure 5-3

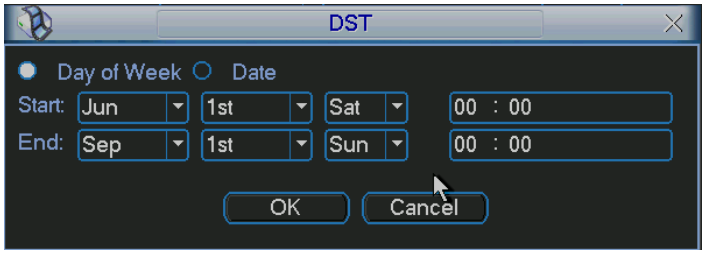


Figure 5-4

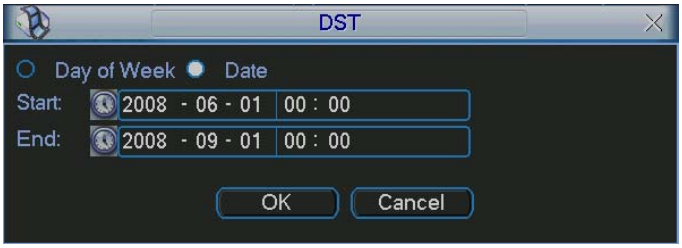


Figure 5-5

5.3.2 Encode

Encode setting includes the following items. See Figure 5-6.
Please note some series do not support extra stream.

- Channel: Select the channel you want.
- Compression: system supports H.264. Or you can select from the dropdown list.
- Resolution: System supports various resolutions, you can select from the dropdown list. For this model, we can support D1/CIF.
- Bit rate: system supports two types: CBR and VBR. In VBR mode, you can set video quality.
- Quality: There are six levels ranging from 1 to 6. The sixth level has the highest image quality.
- Frame rate: there are six levels: 1 f/s,2f/s,3f/s, 6f/s,12f/s,25f/s. (Some series DVRs only support PAL 25f/s)
- Video/audio: you can enable or disable the video/audio.
- Overlay: click overlay button, you can see an interface is shown in Figure 5-7.
- ✧ Cover area (Privacy mask): Here is for you to set window blanking section. You can drag you mouse to set proper section size.
- ✧ Preview/monitor: privacy mask has two types. Preview means the privacy mask zone can not be viewed by user when system is in preview status. Monitor means the privacy mask zone can not be view by the user when system is in monitor status.
- ✧ Time display: You can select system displays time or not when you playback.
- ✧ Channel display: You can select system displays channel number or not when you playback.

System default setup is:

- Channel:1
- Compression:H.264
- Resolution: CIF/D1
- Bit rate: CBR
- Quality: 4
- Frame rate: 25f/s

Please highlight icon to select the corresponding function.

Figure 5-6

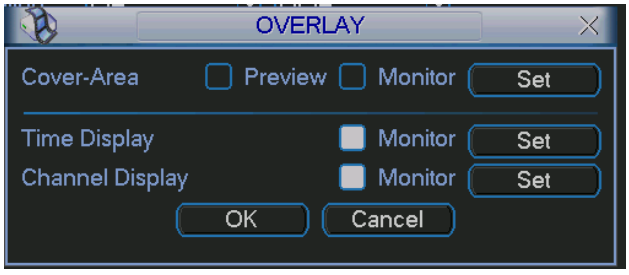


Figure 5-7

5.3.3 Schedule

Please refer to chapter 4.4 schedule.

5.3.4 RS232

RS232 interface is shown as below. Here are five items. See Figure 5-8.

- Function: There are various devices for you to select. Console is for serial port or min-end platform to upgrade program. Keyboard is for you to use special keyboard to control current device.
- Baud rate: You can select proper baud rate.
- Data bit: You can select proper data bit.
- Stop bit: There are three values: 1/1.5/2.
- Parity: there are three choices: none/odd/even.

After completing all the setups please click save button, system goes back to the previous menu.

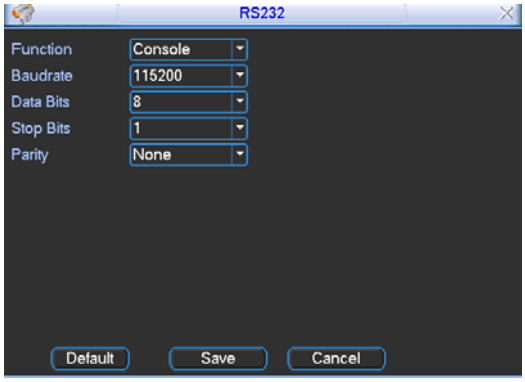


Figure 5-8

5.3.5 Network

Here is for you to input network information. See Figure 5-9.

- IP address: Here you can input IP address.
- DHCP: It is auto search IP function. When enable DHCP function, you can not modify IP/Subnet mask /Gateway. These values are from DHCP function. If you have not enabled DHCP function, IP/Subnet mask/Gateway display as o. You need to disable DHCP function to view current IP information. Besides, when PPPoE is operating, you can not modify IP/Subnet mask /Gateway.
- TCP port: Default value is 37777. (System server port 37778 is reserved for network UDP use.)
- UDP port: Default value is 37778.
- HTTP port: Default value is 80.
- Max connection: system support maximal 10 users. 0 means there is no connection limit.
- Transfer mode: Here you can select the priority between fluency/video qualities.
- Network download: System can process the downloaded data first if you enable this function.

After completing all the setups please click save button, system goes back to the previous menu.

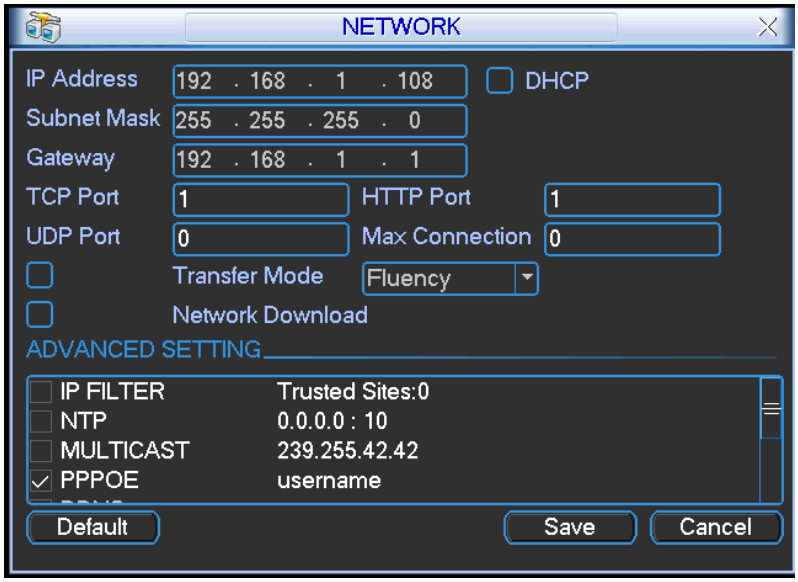


Figure 5-9

5.3.5.1 Advanced Setup

Advanced setup interface is shown as in Figure 5-10. Please draw a circle to enable corresponding function and then double click current item to go to setup interface.

Figure 5-10

5.3.5.2 IP Filter

IP filter interface is shown as in Figure 5-11. You can add IP in the following list. The list supports max 64 IP addresses.

Please note after you enabled this function, only the IP listed below can access current DVR.

If you disable this function, all IP addresses can access current DVR.

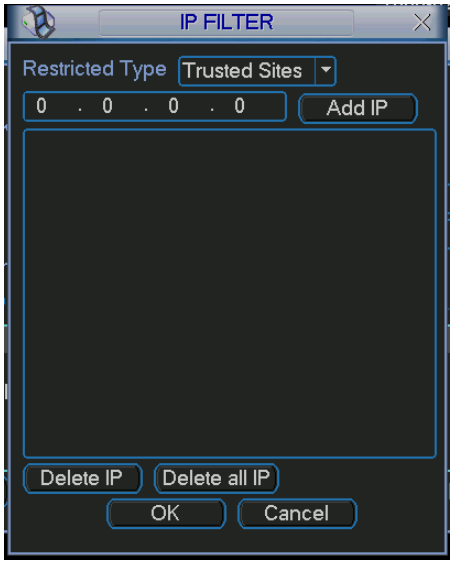


Figure 5-11

5.3.5.3 Multiple Cast Setup

Multiple-cast setup interface is shown as in Figure 5-12.

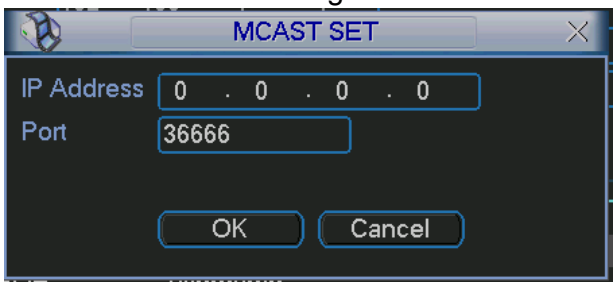


Figure 5-12

Here you can set a multiple cast group. Please refer to the following sheet for detailed information.

- IP multiple cast group address

-224.0.0.0-239.255.255.255

-“D” address space

  - The higher four-bit of the first byte=”1110”

- Reserved local multiple cast group address

-224.0.0.0-224.0.0.255

-TTL=1 When sending out telegraph

-For example

224.0.0.1 All systems in the sub-net

224.0.0.2 All routers in the sub-net

224.0.0.4 DVMRP router

224.0.0.5 OSPF router

224.0.0.13 PIMv2 router

- Administrative scoped addressees

-239.0.0.0-239.255.255.255

-Private address space

- Like the single broadcast address of RFC1918
- Can not be used in Internet transmission
- Used for multiple cast broadcast in limited space.

Except the above mentioned addresses of special meaning, you can use other addresses. For example:
Multiple cast IP: 235.8.8.36
Multiple cast PORT: 3666.

5.3.5.4 PPPoE

PPPoE interface is shown as in Figure 5-13.
Input “PPPoE name” and “PPPoE password” you get from your ISP (Internet service provider).
Click save button, you need to restart to activate your configuration.
After rebooting, IP camera will connect to internet automatically. The IP in the PPPoE is the DVR dynamic value. You can access this IP to visit the unit.

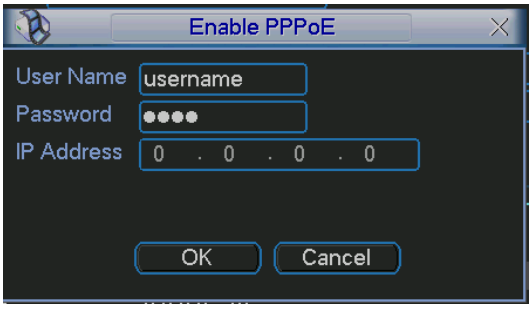


Figure 5-13

5.3.5.5 NTP Setup

You need to install SNTP server (Such as Absolute Time Server) in your PC first. In Windows XP OS, you can use command “net start w32time” to boot up NTP service.
NTP setup interface is shown as in Figure 5-14.

- Host IP: Input your PC address.
- Port: This series DVR supports TCP transmission only. Port default value is 123.
- Update interval: minimum value is 15(Unit: minute)
- Time zone: select your corresponding time zone here.

Here is a sheet for your time zone setup.

City /Region Name	Time Zone
London	GMT+0
Berlin	GMT+1
Cairo	GMT+2
Moscow	GMT+3
New Deli	GMT+5
Bangkok	GMT+7
Beijing (Hong Kong)	GMT+8
Tokyo	GMT+9
Sydney	GMT+10
Hawaii	GMT-10
Alaska	GMT-9
Pacific Time(P.T)	GMT-8

American Mountain Time(M.T)	GMT-7
American Central Time(C.T)	GMT-6
American Eastern Time(E.T)	GMT-5
Atlantic Time	GMT-4
Brazil	GMT-3
Middle Atlantic Time	GMT-2

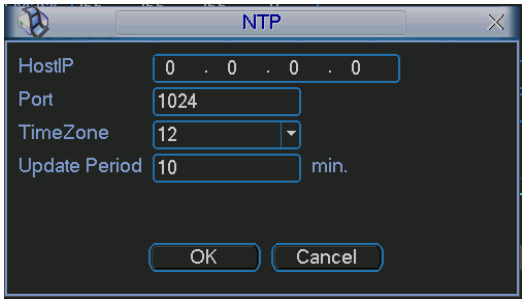


Figure 5-14

5.3.5.6 Email Setup

Email setup interface is shown as in Figure 5-15. Here you can set email server information.

Note:

You need to get the email address from your email service provider first.

Please use semicolon to separate the addresses.

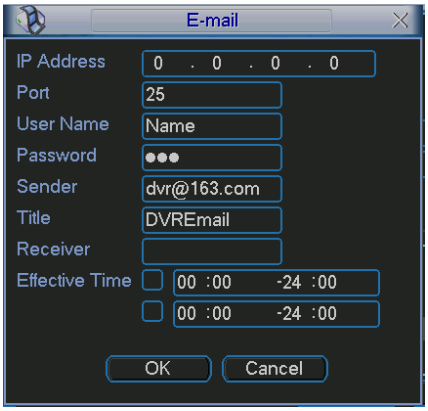


Figure 5-15

5.3.5.7 DDNS Setup

DDNS setup interface is shown as in Figure 5-16.

You need a PC of fixed IP in the internet and there is the DDNS software running in this PC. In other words, this PC is a DNS (domain name server).

In network DDNS, input your PPPoE name you get from you IPS and server IP (PC with DDNS) . Click save button and then reboot system.

Click save button, system prompts for rebooting to get all setup activated.

After rebooting, open IE and input as below:

http：//(DDNS server IP)/(virtual directory name)/webtest.htm

e.g.: http：//10.6.2.85/DVR _DDNS/webtest.htm.)

Now you can open DDNSServer web search page.

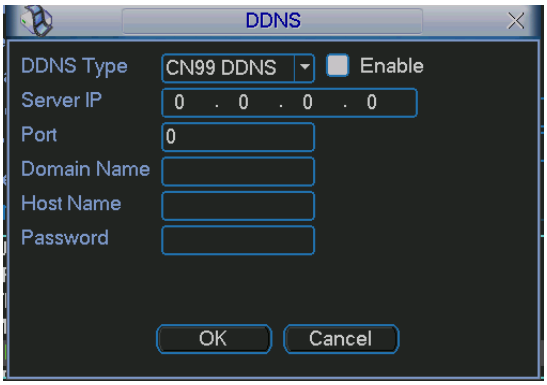


Figure 5-16

5.3.5.8 Alarm Server

You can set alarm in accordance with different alarm protocols. System can inform the alarm server when alarm occurs. See Figure 5-17.

Figure 5-17

5.3.5.9 FTP

You need to download or buy FTP service tool (such as Ser-U FTP SERVER) to establish FTP service.

Please install Ser-U FTP SERVER first. From “start” -> “program” -> Serv-U FTP Server -> Serv-U Administator. Now you can set user password and FTP folder. Please note you need to grant write right to FTP upload user. See Figure 5-18.

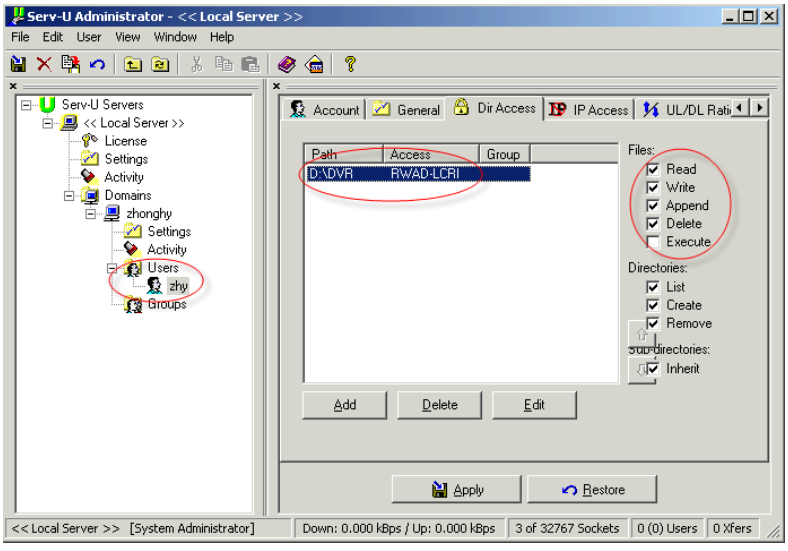


Figure 5-18

You can use a PC or FTP login tool to test setup is right or not.
For example, you can login user ZHY to FTP://10.10.7.7 and then test it can modify or delete folder or not. See Figure 5-19.

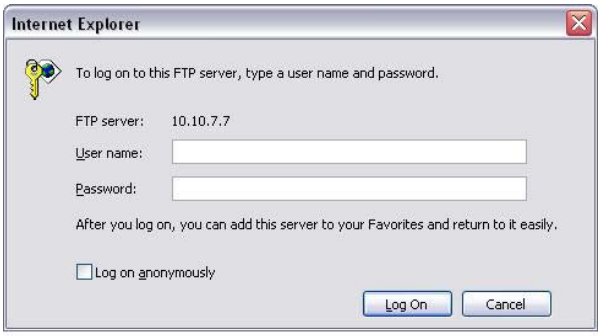

Internet Explorer
To log on to this FTP server, type a user name and password.
FTP server: 10.10.7.7
User name:
Password:
After you log on, you can add this server to your Favorites and return to it easily.
Log on anonymously
Log On
Cancel

Figure 5-19

System also supports upload multiple DVRs to one FTP server. You can create multiple folders under this FTP.
In Figure 5-9, select FTP and then double click mouse. You can see the following interface. See Figure 5-20.

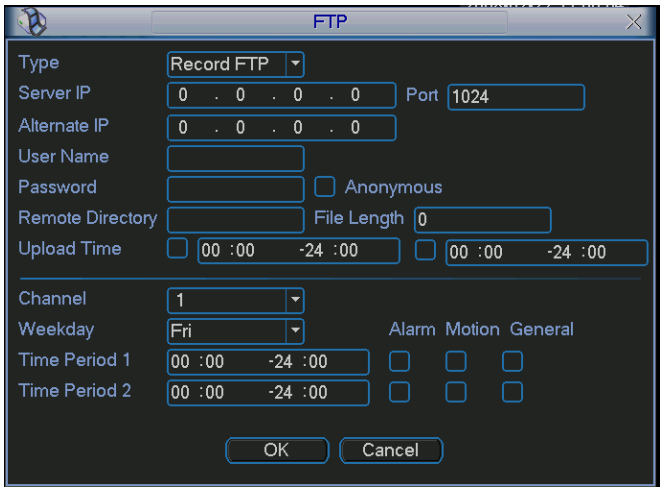


Figure 5-20

Please highlight the icon in front of Enable to activate FTP function.
Now FTP can upload alarm video and motion detection video. Please note, when you are using this function, please make sure current upload channel is in motion detection or alarm record status and there is video available.
Here you can input FTP server address, port and etc.

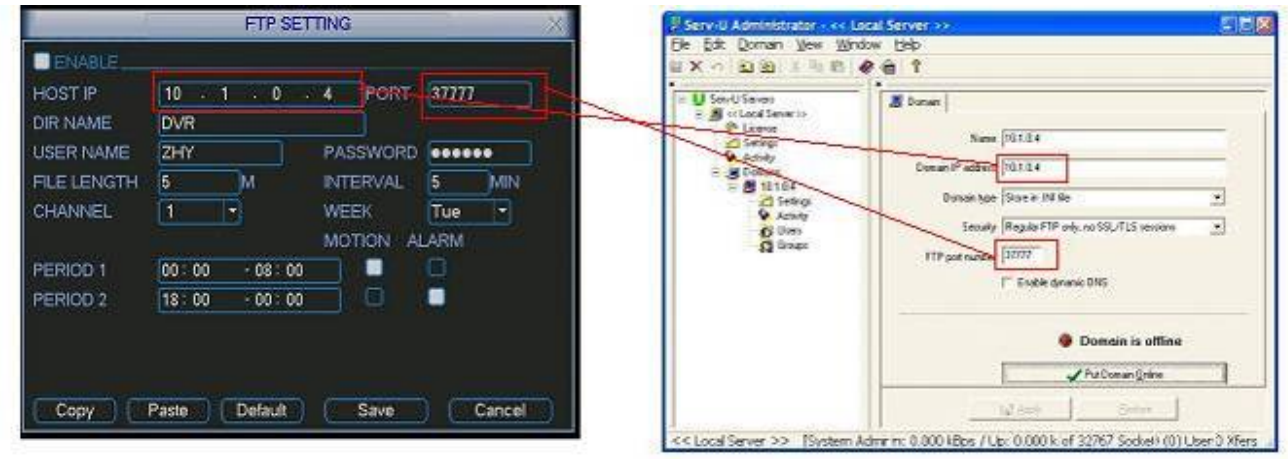


Figure 5-21

- File length: upload file length. When setup is larger than the actual file length, system will upload the whole file. When setup here is smaller than the actual file length, system only uploads the set length and auto ignore the left section.
- When interval value is 0, system uploads all corresponding files.
- Period 1 and period 2: you can set two periods for one each channel.

System file name is shown as in Figure 5-22.

Figure 5-22

5.3.6 Alarm

Please refer to chapter 4.6 Alarm Setup and Activation.

5.3.7 Detect

Please refer to chapter 4.5 Detect.

5.3.8 Pan/Tilt/Zoom

The pan/tilt/zoom setup includes the following items. Please select channel first. See Figure 5-23.

- Protocol: select corresponding PTZ protocol such as PELCOD.
- Address: input corresponding PTZ address.
- Baud rate: select baud rate.
- Data bit: select data bit.
- Stop bit: select stop bit.
- Parity: there are three choices: none/odd/even.

After completing all the setups please click save button, system goes back to the previous menu.

For detailed setup, please refer to chapter 4.9 preset/patrol/pattern/scan.

Figure 5-23

5.3.9 Display

Display setup interface is shown as below. See Figure 5-24.

- Transparency: Here is for you to adjust transparency. The value ranges from 128 to 255.
- Channel name: Here is for you to modify channel name. Please note all your modification here only applies to DVR local end. You need to open web or client end to refresh channel name.
- Time display: You can select to display time or not when system is playback.
- Channel display: You can select to channel name or not when system is playback.
- Overlay information: System displays some information in the screen for your reference.
- Display mode: you can select from the dropdown list: self-adaptive/VGA/TV.
- Enable tour: activate tour function.
- Interval: Input proper interval value here. The value ranges from 5-200 seconds. In tour process, you can use mouse or click Shift to turn on window switch function. Stands for opening switch function, stands for closing switch function.
- Motion tour type: System support 1/8 window tour.
- Alarm tour type: System support 1/8 window tour.

Please highlight icon to select the corresponding function.

After completing all the setups please click save button, system goes back to the previous menu.

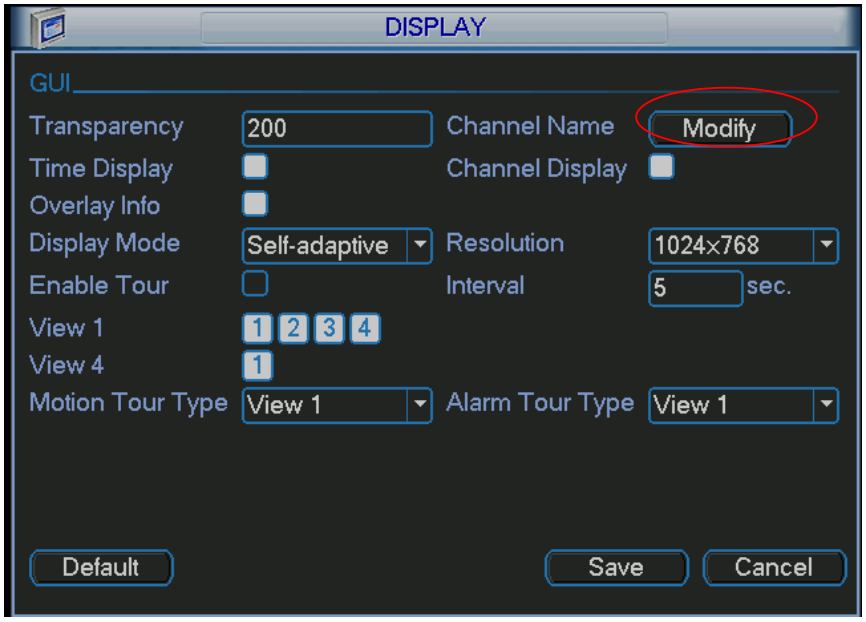


Figure 5-24

In Figure 5-24, click modify button after channel. You can see an interface is shown as in Figure 5-25. Please note all your modification here applies to local end only. You need to refresh web or client-end to get the latest channel name. System max support 25-digital character.

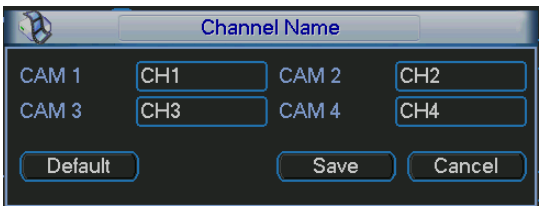


Figure 5-25

In tour mode, you can see the following interface. On the right corner, right click mouse or click shift button, you can control the tour. There are two icons: stands for enabling window switch and stands for enabling window function. See Figure 5-26.

Figure 5-26

5.3.10 Default

Click default icon, system pops up a dialogue box. You can highlight to restore default factory setup. See Figure 5-27.

- Select all
- General
- Encode
- Schedule
- RS232
- Network
- Alarm
- Detect
- Pan/tilt/zoom
- Display
- Channel name

Please highlight icon to select the corresponding function.
After all the setups please click save button, system goes back to the previous menu.
Warning!
System menu color, language, time display mode, video format, IP address, user account will not maintain previous setup after default operation!

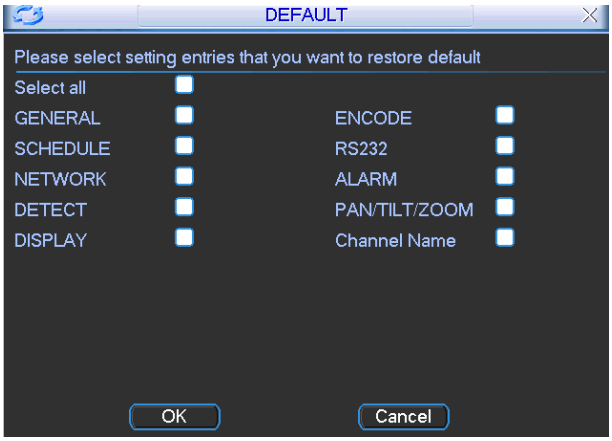


Figure 5-27

5.4 Search

Please refer to chapter 4.3 Search.

5.5 Advanced

Double click advanced icon in the main window, the interface is shown as below. See Figure 5-28. There are total seven function keys: HDD management, alarm output, abnormity, manual record, account, auto maintain, and TV adjust.

Figure 5-28

5.5.1 HDD Management

Here is for you to view and implement hard disk management. See Figure 5-29.
You can set proper mode for each hard disk from the dropdown list.
When you use redundant backup function, you can set one or more redundant HDD(s). Please note you need to set at least one read-write disk, otherwise system will not record video. For detailed information you can refer to chapter 4.4 Schedule.
After all the setups please click save button, system needs to reboot to get all the modification activated.

Figure 5-29

Click alarm set button, the interface is shown as below. See Figure 5-30(This interface is just like the abnormity setup).

Please highlight icon ☐ to select the corresponding function.
You can enable one or more alarm setups. The lower limit ranges from 1% to 99%. Alarm channel number ranges from 1 to 6. Delay value is from 0 to 240 seconds.
Please note when HDD capacity is not full system only alarms once!

After all the setups please click OK button, system goes back to the previous menu

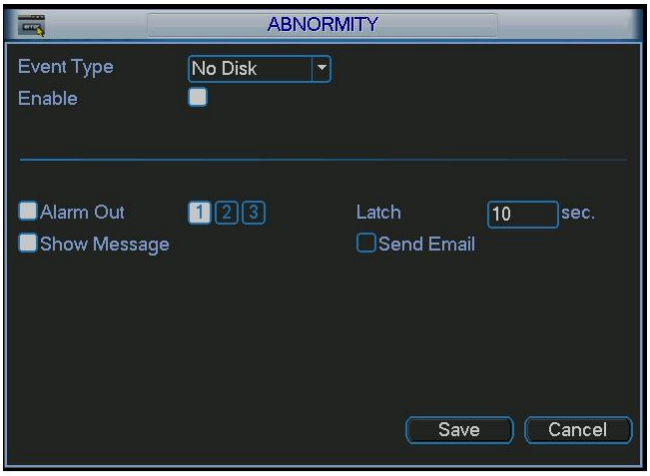


Figure 5-30

5.5.2 Abnormity

Abnormity interface is shown as in Figure 5-31.

- Event type: There are several options for you such as disk error, no disk and etc.
- Alarm output: alarm activation output port (multiple choices), among which is controllable 12V output.
- Latch: here you can set corresponding delaying time. The value ranges from 10s-300s. System automatically delays specified seconds in turning off alarm and activated output after external alarm cancelled.
- Show message: system can pop up the message in the local screen to alert you when alarm occurs.
- Send email: System can send out email to alert you when alarm occurs.

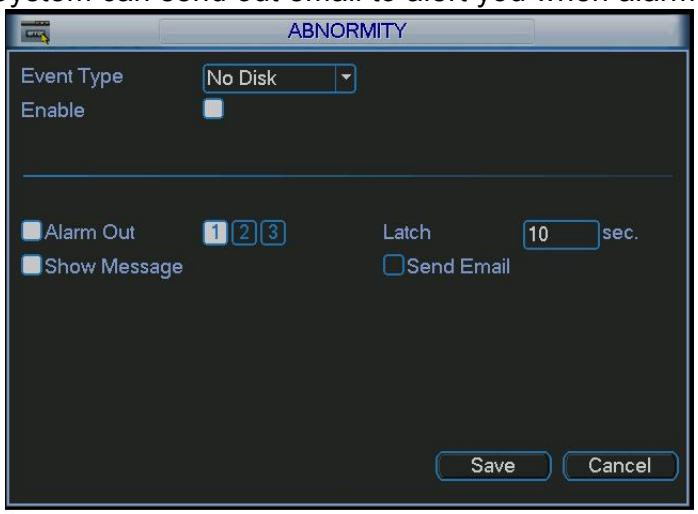


Figure 5-31

5.5.3 Alarm Output

Here is for you to set proper alarm output.

Please highlight icon to select the corresponding alarm output.
After all the setups please click OK button, system goes back to the previous menu. See Figure 5-32.

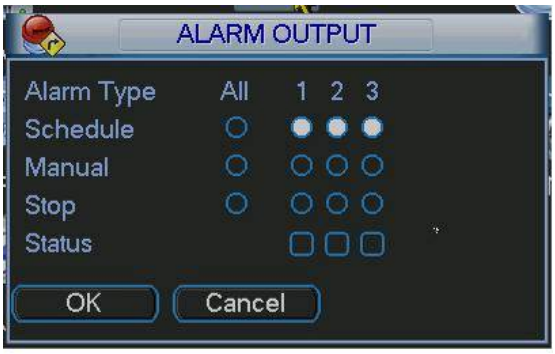


Figure 5-32

5.5.4 Manual Record

Please refer to chapter 4.2.2 manual record.

5.5.5 Account

Here is for you to implement account management. See Figure 5-33. Here you can:

- Add new user
- Modify user
- Add group
- Modify group
- Modify password.

For account management please note:

- System account adopts two-level management: group and user. No limit to group or user amount.
- For group or user management, there are two levels: admin and user.
- The user name and group name can consist of eight bytes. One name can only be used once. There are four default users: admin/888888/666666 and hidden user “default”. Except user 6666, other users have administrator right.
- Hidden user “default” is for system interior use only and can not be deleted. When there is no login user, hidden user “default” automatically login. You can set some rights such as monitor for this user so that you can view some channel view without login.
- One user should belong to one group. User right can not exceed group right.
- About reusable function: this function allows multiple users use the same account to login.

After all the setups please click save button, system goes back to the previous menu.

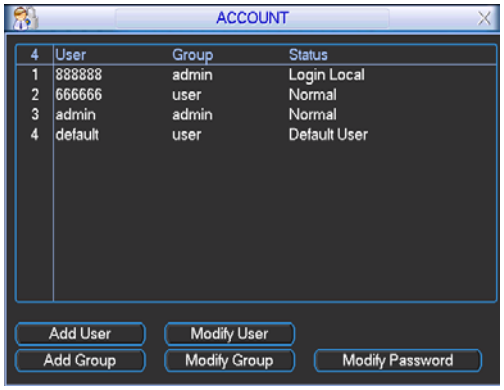


Figure 5-33

5.5.6 Auto Maintain

Here you can set auto-reboot time and auto-delete old files setup. See Figure 5-34. You can select proper setup from dropdown list.

*** It is strongly recommended to setup auto reboot at least once per week**. This will clear the system resources for optimal operation and prevent file loss due to interruption from hardware/software issues.

After all the setups please click save button, system goes back to the previous menu.

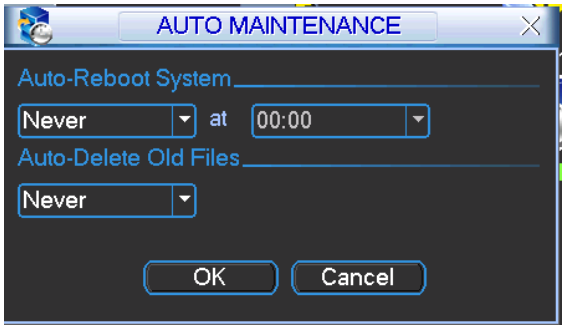


Figure 5-34

5.5.7 TV Adjust

Here is for you to adjust TV output setup. See Figure 5-35.

Please drag slide bar to adjust each item.

After all the setups please click OK button, system goes back to the previous menu.

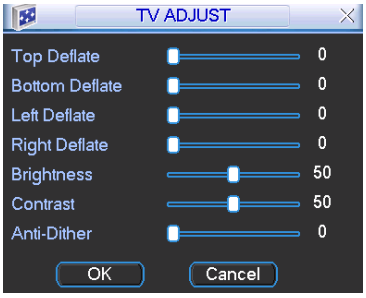


Figure 5-35

5.6 Information

Here is for you to view system information. There are total five items: HDD (hard disk information), BPS (data stream statistics), Log and version, and online user. See Figure 5-36.

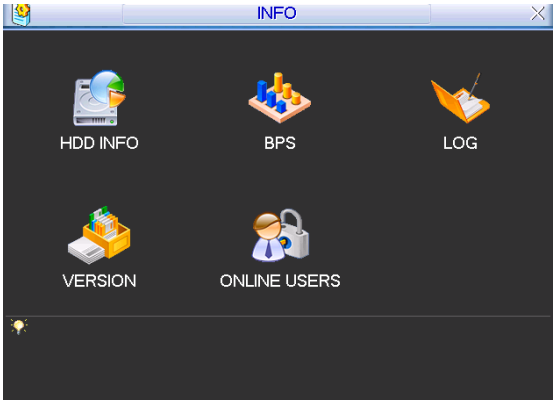


Figure 5-36

5.6.1 HDD Information

Here is to list hard disk type, total space, free space, video start time and status. See Figure 5-37.

Note:

Please remove the broken hard disk before you add a new one.

Once there is a hard disk confliction, please check hard disk time and system time is the same or not. Please go to setting then general to modify system time. At last, reboot the system to solve this problem.

If disk is damaged, system shows as “?”

Figure 5-37

5.6.2 BPS

Here is for you to view current video data stream (KB/s) and occupied hard disk storage (MB/h). See Figure 5-38.

Figure 5-38

5.6.3 Log

Here is for you to view system log file. System lists the following information. See Figure 5-39. System max supports 1024 log files.

Log types include system operation, configuration operation, data management, alarm event, record operation, log clear and etc.

Pleased select start time and end time, then click search button. You can view the log files. Please page up/down button to view if there are more than ten files.

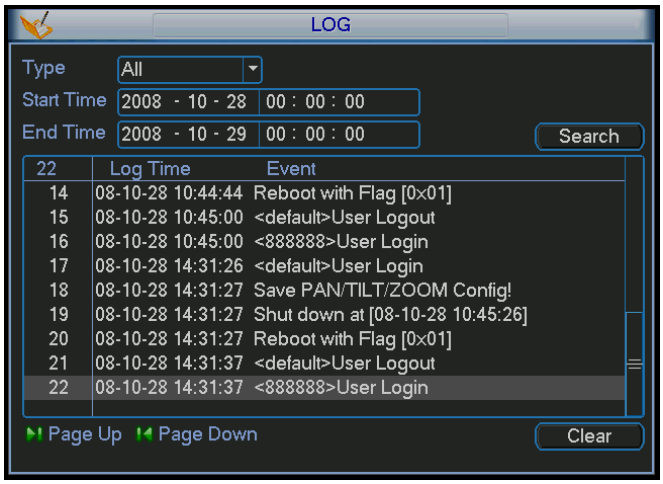


Figure 5-39

5.6.4 Version

Here is for you to view some version information. See Figure 5-40.

- Channel
- Alarm in
- Alarm out
- System version:
- Build Date

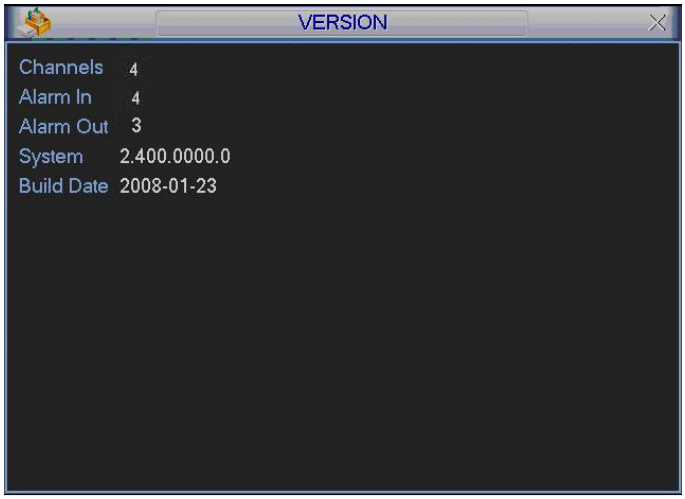


Figure 5-40

5.6.5 Online Users

Here is for you manage online users. See Figure 5-41.

You can disconnect one user or block one user if you have proper system right.

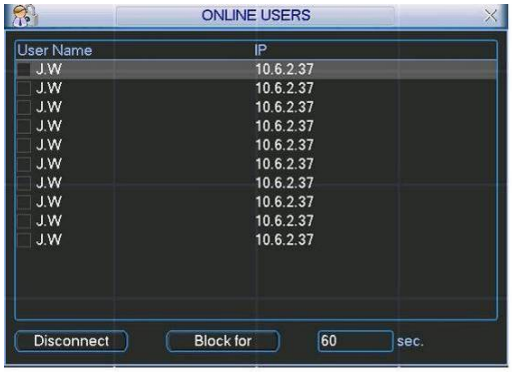


Figure 5-41

5.7 Backup

Please refer to chapter 4.7.2.

5.8 Exit

Double click exit button, system pop up a dialogue box for you to select. See Figure 5-42.

- Logout menu user: log out menu. You need to input password when you login the next time.
- Restart application: reboot DVR.
- Shutdown: system shuts down and turns off power.
- Restart system: system begins rebooting.
- Switch user: you can use another account to log in.

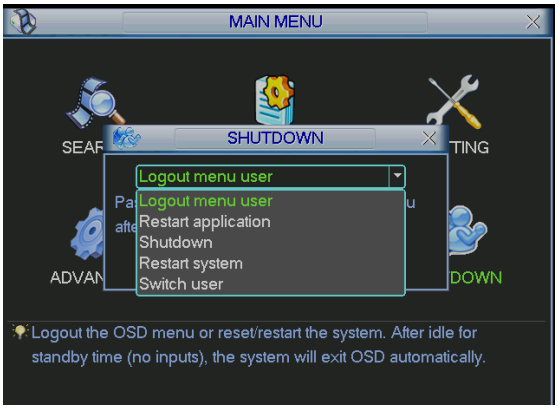

MAIN MENU
SHUTDOWN
Logout menu user
Logout menu user
Restart application
Shutdown
Restart system
Switch user
Logout the OSD menu or reset/restart the system. After idle for standby time (no inputs), the system will exit OSD automatically.

Figure 5-42

6 About Auxiliary Menu

6.1 Go to Pan/Tilt/Zoom Menu

In the single window surveillance screen, right click mouse (or click AUX key in the remote control). The interface is shown as below: See Figure 6-1.

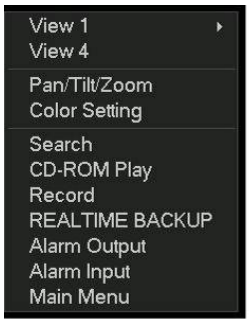


Figure 6-1

Click Pan/Tilt/Zoom, the interface is shown as in Figure 6-2.
Here you can set the following items:

- Zoom
- Focus
- Iris

Click icon and to adjust zoom, focus and Iris.

Figure 6-2

In Figure 6-2, please click direction arrows (See Figure 6-3) to adjust PTZ position. There are totally eight direction arrows. (Please note there are only four direction arrows in DVR front panel.)

Figure 6-3

6.1.1 3D Intelligent Positioning Key

In the middle of the eight direction arrows, there is a 3D intelligent positioning key. See Figure 6-4 . Click this button, system goes back to the single screen mode. Drag the mouse in the screen to adjust section size.

Figure 6-4

Here is a sheet for you reference.

Name	Key	Function	Shortcut Key	Key	Function	Shortcut Key
Zoom		Near	▶		Far	▶▶
Focus		Near	◀		Far	▶
Iris		Close	⏸◀		Open	▶⏸

6.2 Preset /Patrol / Pattern /Border Function

In Figure 6-2 click the set button. The interface is shown as below:
Here you can set the following items:

- Preset
- Patrol
- Pattern
- Border

Figure 6-5

In Figure 6-2, click page switch button, you can see an interface as in Figure 6-6.
Here you can activate the following functions:

- Preset
- Tour(Patrol)
- Pattern
- Auto scan
- Auto pan
- Flip
- Page Switch

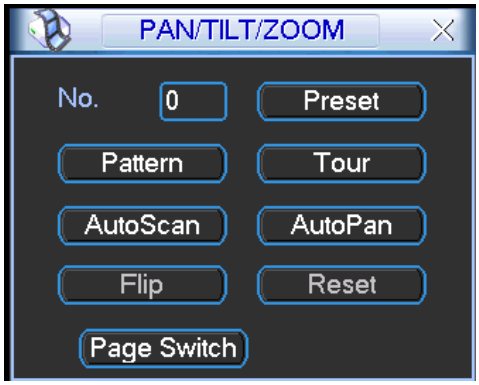


Figure 6-6

6.2.1 Preset Setup

Note: The following setups are usually operated in the Figure 6-2, Figure 6-5 and Figure 6-6.

In Figure 6-2, use eight direction arrows to adjust camera to the proper position.

In Figure 6-5, click preset button and input preset number. The interface is shown as in Figure 6-7.

Add this preset to one patrol number

Figure 6-7

6.2.2 Activate Preset

In Figure 6-6 please input preset number in the No. blank, and click preset button.

6.2.3 Patrol Setup

In Figure 6-5, click patrol button. The interface is shown as in Figure 6-8.

Input preset number and then add this preset to one patrol.

Figure 6-8

6.2.4 Activate Patrol

In Figure 6-6, input patrol number in the No. blank and click patrol button

6.2.5 Pattern Setup

In Figure 6-5, click pattern button and then click begin button. The interface shows like Figure 6-9.
Please go to Figure 6-2 to modify zoom, focus, and iris. Go back to Figure 6-9 and click end button.
You can memorize all these setups as pattern 1.

Figure 6-9

6.2.6 Activate Pattern Function

In Figure 6-6 input mode value in the No. blank, and click pattern button.

6.2.7 Border Setup

In Figure 6-5, click border button. The interface is shown as in Figure 6-10.
Please go to Figure 6-2, use direction arrows to select camera left limit, and then please go to Figure 6-10 and click left limit button
Repeat the above procedures to set right limit.

Figure 6-10

6.2.8 Activate Border Function

In Figure 6-6, click auto scan button, the system begins auto scan. Correspondingly, the auto scan button changes to stop button.
Click stop button to terminate scan operation.

6.2.9 Flip

In Figure 6-6, click page switch button, you can see an interface is shown as below. See Figure 6-11. Here you can set auxiliary function.
Click page switch button again, system goes back to Figure 6-2.

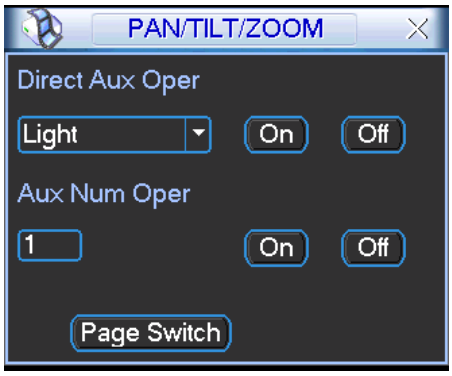

PAN/TILT/ZOOM
Direct Aux Oper
Light
On
Off
Aux Num Oper
1
On
Off
Page Switch

Figure 6-11

7 WEB CLINET OPERATION

Please note, all the operation here in chapter seven is based on our 4-ch DVR. There might be slightly difference in the interface due to different series.

7.1 Network Connection

Before web client operation, please check the following items:

- Network connection is right
- DVR and PC network setup is right. Please refer to general-system setting-network setup
- Use order ping ***.***.***.***(* DVR IP address) to check connection is OK or not. Usually the return TTL value should be less than 255.

7.2 Login and logout

Open IE and input DVR address in the address column. For example, if your DVR IP is 10.10.3.16, then please input http:// 10.10.3.16 in IE address column. See Figure 7-1

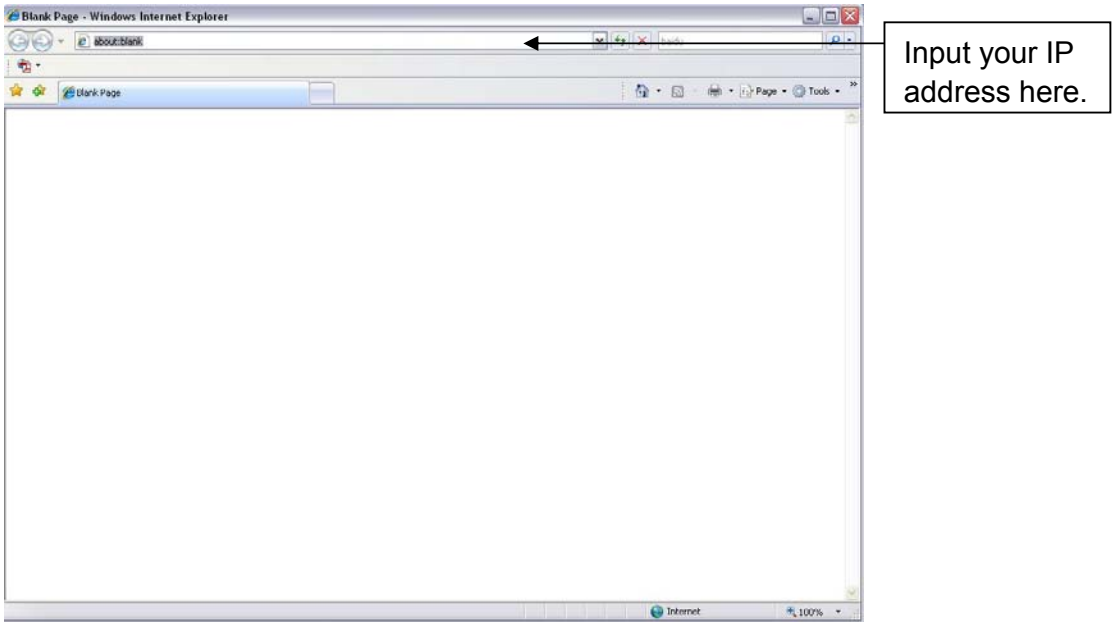


Figure 7-1

System pops up warning information to ask you whether install webrec.cab control or not. Please click yes button.

If you can't download the ActiveX file, please modify your settings as follows. See .Figure 7-2

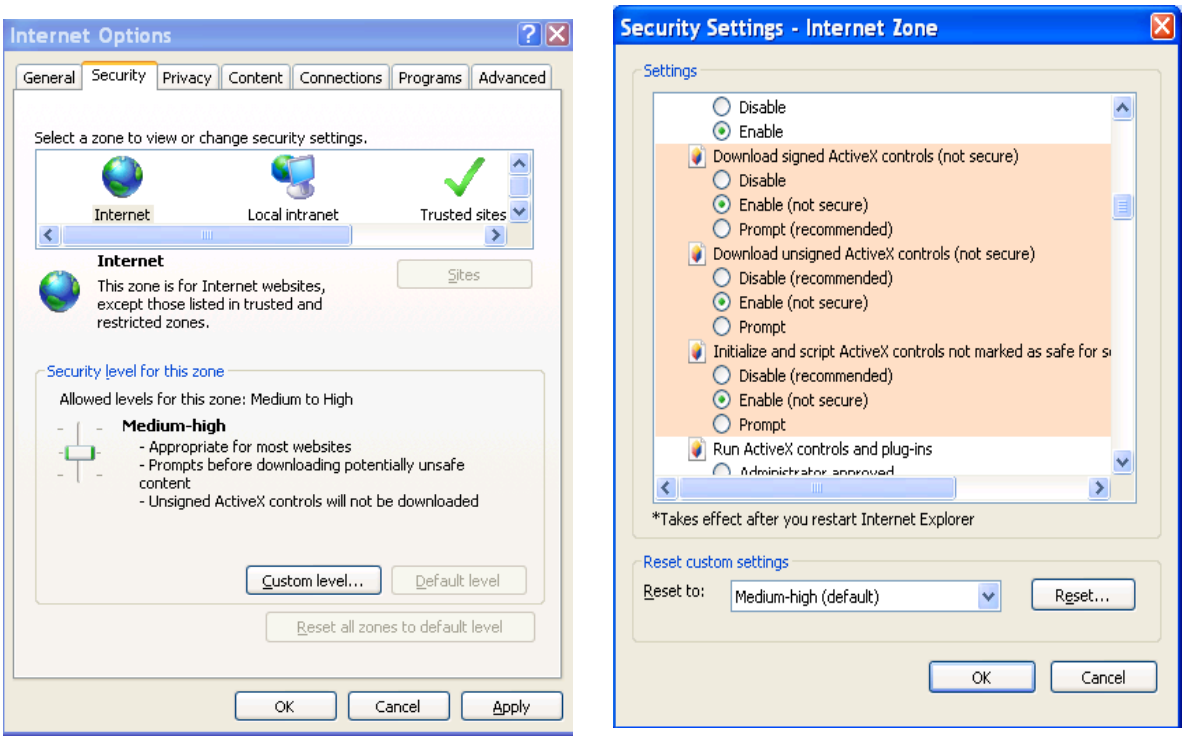


Figure 7-2

After installation, the interface is shown as below. See Figure 7-3.
Please input your user name and password.
Default factory name is admin and password is admin.
Note: For security reasons, please modify your password after you first login.

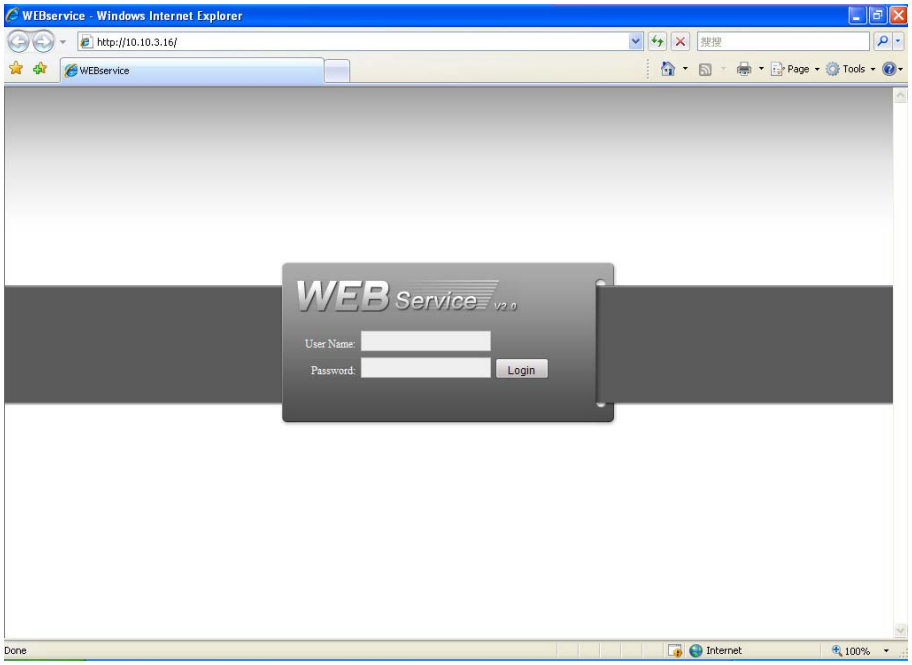


Figure 7-3

After you logged in, you can see the main window. See Figure 7-6.

This main window can be divided into the following sections.

- Section 1: there are five function buttons: configuration (chapter 7.3), search (chapter 7.4), alarm (chapter 7.5), about (chapter 7.6), log out (chapter 7.7).
- Section 2: there are channel number and five function buttons: open all/start dialog/refresh/ local play/burning.
- Section3: there are PTZ (chapter 7.2.2), color (chapter 7.2.3) button and you can also select picture path and record path.
- Section 4:real-time monitor window. Please note current preview window is circled by a green rectangle zone.
- Section 5: Here you can view window switch button. You can also select video priority between fluency or real-time.
  - ✧ System monitor window switch supports full screen/1-window/4-window/6-window/8-window/9-window/13-window/16-window/20-window/25-window/36-window. See Figure 7-4.

Figure 7-4

- ✧ Preview window switch. System support 1/4/8/9/16-window real-time preview. Please you need to have the proper rights to implement preview operation. You can not preview if you have no right to preview the either channel. See Figure 7-5.

Figure 7-5

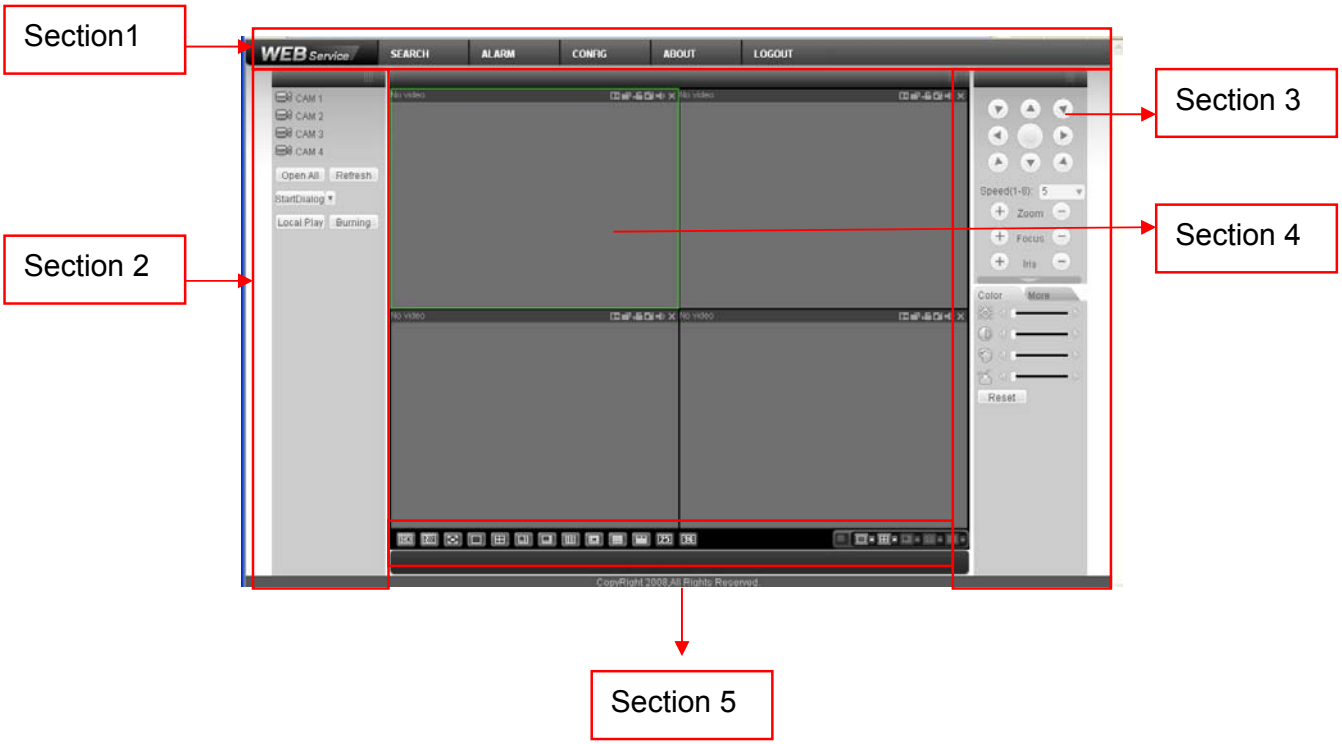


Figure 7-6

7.2.1 Real-time Monitor

In section 2, left click the channel name you want to view, you can see the corresponding video in current window.

For detailed function key information, please refer to Figure 7-7.

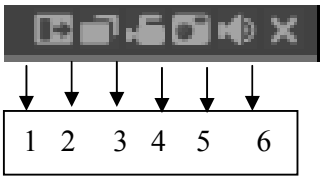


Figure 7-7

- 1: Digital zoom: Click this button and then left drag the mouse in the zone to zoom in. right click mouse system restores original status.
- 2: Change show mode: resize or switch to full screen mode.
- 3: Local record. When you click local record button, the system begins recording and this button becomes highlighted. You can go to system -.local record to set video file path.
- 4: Capture picture. You can snapshoot important video. All images are memorized in system client folder \download\picture (default).
- 5: Audio :Turn on or off audio.(It has no relationship with system audio setup)
- 6: Close video.

Please refer to Figure 7-8 for main stream and extra stream switch information.

Figure 7-8

Open all

You can click this button to enable four channels at the same time.

Refresh

You can use button to refresh camera list.

Start Dialogue

You can click this button to enable audio talk. There are three options: Default/PCM/G711a. See Figure 7-9.

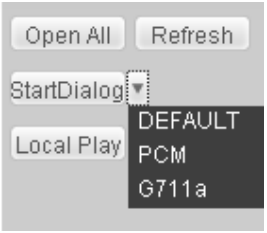


Figure 7-9

Local Play

Click local play button, system pops up the following interface for you to select local play file. See Figure 7-10.

Figure 7-10

7.2.2 Burning

In Figure 7-8, click burning button. You can see an interface is shown as in Figure 7-11. Click start searching button, you can view current CD information such as total space, free space and current status.

Please select the CD and then input password and set title.

Then you can select record channel, system max support 2 channels at the same time.

Finally, you can click start burning button.

Start searching: just like the detect button in DVR main menu,. System can display available CD and corresponding status.

- Preview: you can input relative information here. When playback, system can display information on player right side.
- Password. You can set playback password here. Please input password first and then click set button. After you enabled this function, you need to input password to begin playback each time.
- Channel number: if you select one channel, then system begins ordinary burning. If you have enabled two channels, then system begins PIP burning.
- Burning type: please note web end supports synchronize burning only.

- Mark: it is a index in the recorded file. You can use this function to search file and locate to the corresponding time. When playback, please right click menu to view mark information. Double click mouse you can go to the corresponding time to play.
- Customized overlay: during the burning, you can overlay customized information. When you playback, you can see customized information is on the top left corner. Each time, the overlay information lasts for five seconds. Usually you can use mark and overlay function together.

Before you enable burning, system still check current CD status.
There are following situations for you selected CD:
If there is backup CD, system prompts there is backup in process, system can not perform the burning at the same time.
If there is a burning in progress, you need to stop current burning first.
If there are all idle CD. The types include: erasable (new/old) and non-erasable (new). System can begin burning.

During the burning process, you can view corresponding burning information such as begin time, end time, total capacity, free capacity.
During the burning process, you can use mark and overlay function to symbolize the important position in the video. After completed the burning, you can use mark function to search desired position and view overlay to understand the video more clearly.

If you want to stop burning during the process, you can click stop burning button.

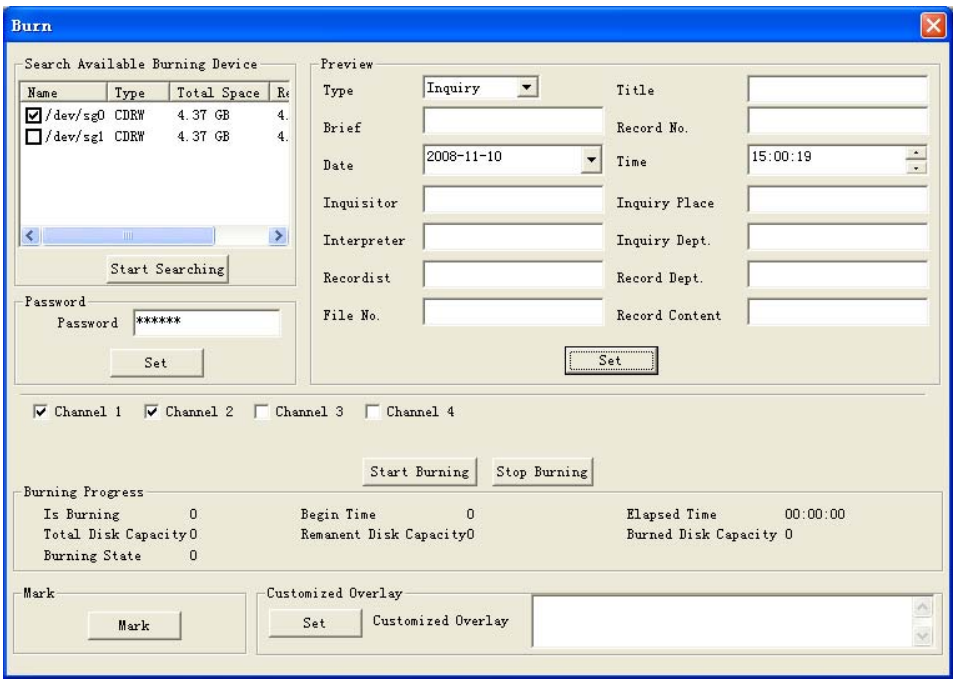


Figure 7-11

7.2.3 PTZ

Before PTZ operation, please make sure you have properly set PTZ protocol. (Please refer to chapter 7.3.2 Setting-> Pan/Tilt/Zoom).
Click PTZ button, the interface is shown as in Figure 7-12 .

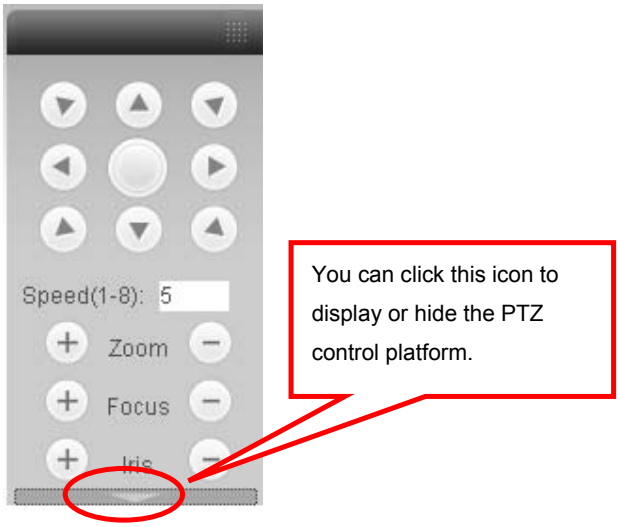


Figure 7-12

7.2.3.1 Direction key and 3D positioning key

In Figure 7-12, there are eight direction keys.

In the middle of the eight direction keys, there is a 3D intelligent positioning key. Click SIT button, system goes back to the single screen mode. Drag the mouse in the screen to adjust section size. It can realize PTZ automatically.

7.2.3.2 Speed

System supports eight-level speed. You can select from the dropdown list. Speed 2 is faster than speed 1.

7.2.3.3 Zoom/Focus/Iris

Here is a sheet for you reference.

Name	Function key	Function	Function key	Function
Zoom		Near		Far
Focus		Near		Far
Iris		close		Open

Then click triangle icon in Figure 7-12, you can see the following interface. See Figure 7-13.

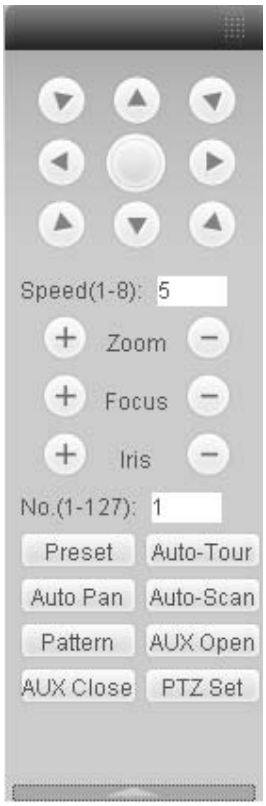


Figure 7-13

In Figure 7-13, click PTZ setup button you can see the following interface. See Figure 7-14.

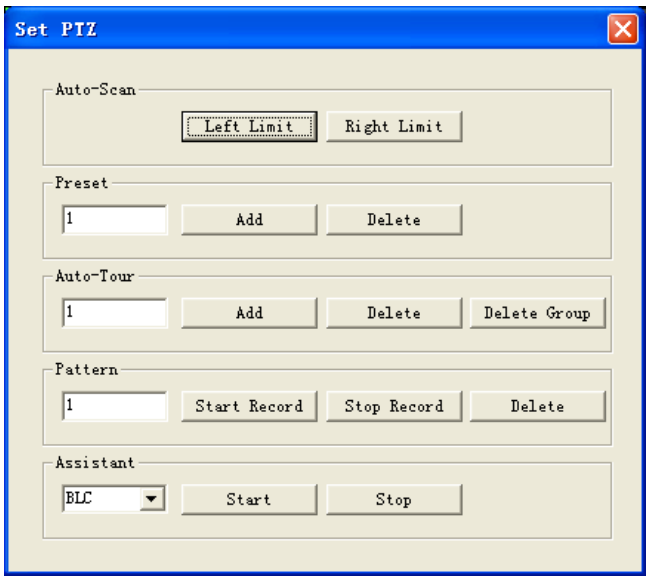


Figure 7-14

7.2.3.4 Auto Scan

In Figure 7-14, move the camera to you desired location and then click left limit button. Then move the camera again and then click right limit button to set a right limit.

7.2.3.5 Pattern

In Figure 7-14, you can input pattern value and then click start record button to begin PTZ movement. Please go back to Figure 7-13 to implement camera operation. Then you can click stop record button. Now you have set one pattern.

7.2.3.6 Preset

In Figure 7-14, move the camera to your desired location and then input preset value. Click add button, you have set one preset.

7.2.3.7 Auto tour

In Figure 7-14, input auto tour value and preset value. Click add button, you have added one preset in the tour.

Repeat the above procedures you can add more presets in one tour.

7.2.3.8 Assistant

You can select the assistant item from the dropdown list. See Figure 7-15.

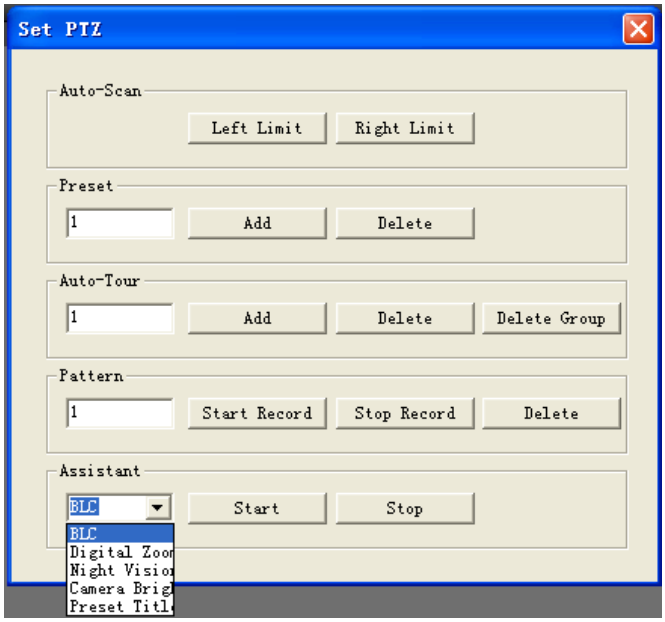


Figure 7-15

7.2.4 Color

Click color button in section 3, the interface is shown as Figure 7-16.

Here you can select one channel and then adjust its brightness, contrast, hue and saturation. (Current channel border becomes green).

Or you can click default button to use system default setup.

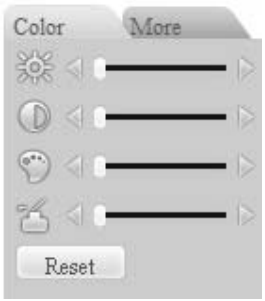


Figure 7-16

7.2.5 Picture Path and Record Path

Click more button in Figure 7-16, you can see an interface is shown as in Figure 7-17.

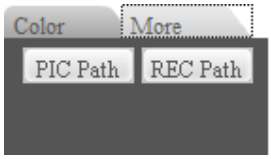


Figure 7-17

Click picture path button, you can see an interface is shown as in Figure 7-18.

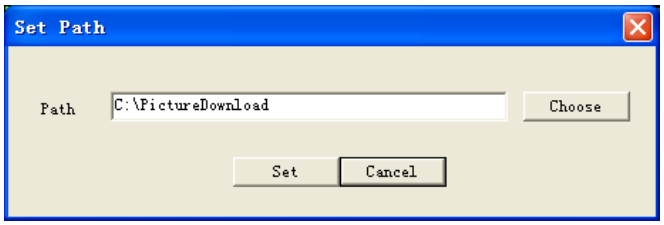


Figure 7-18

Click record path button, you can see an interface is shown as in Figure 7-19.

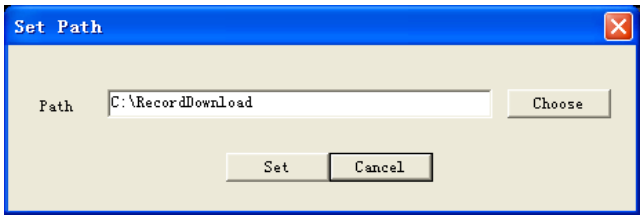


Figure 7-19

7.2.6 Menu Interface Switch

Put your mouse on the PTZ control bar until you see the following icon. See Figure 7-20.

Figure 7-20

Left click your mouse and then drag it to the channel control status bar. You can see the two menus interface switched. See Figure 7-21. You can compare the following interface with
Figure 7-6.

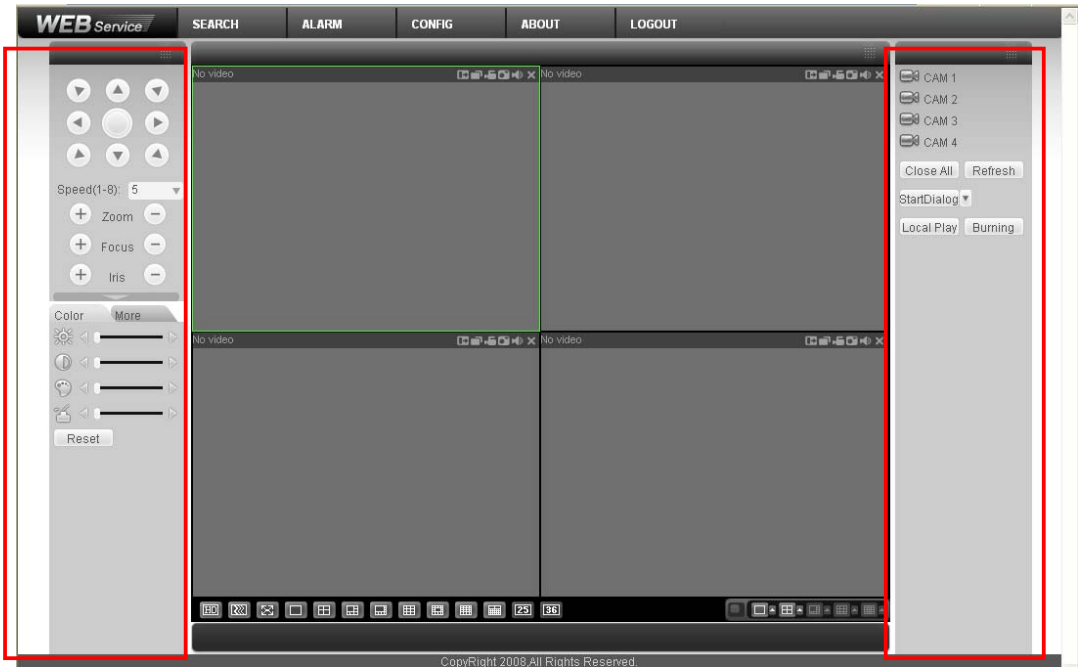


Figure 7-21

7.3 Configure

In the main window, click config button, you can see an interface is shown as in Figure 7-22.

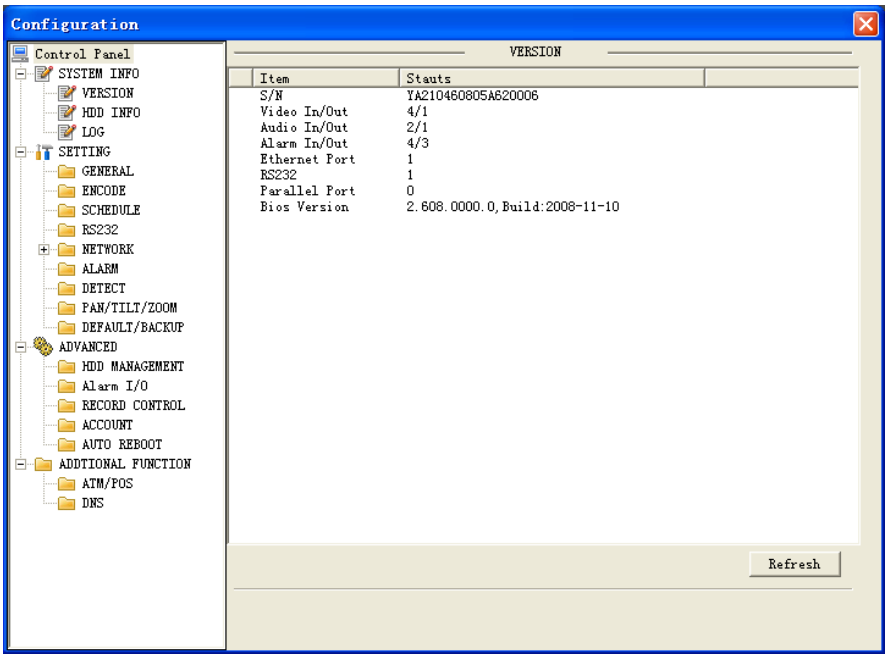


Figure 7-22

7.3.1 System Information

Click system information button, you can see the following interface. See Figure 7-23.

Here you can view:

- ✧ Version
- ✧ HDD information
- ✧ Log

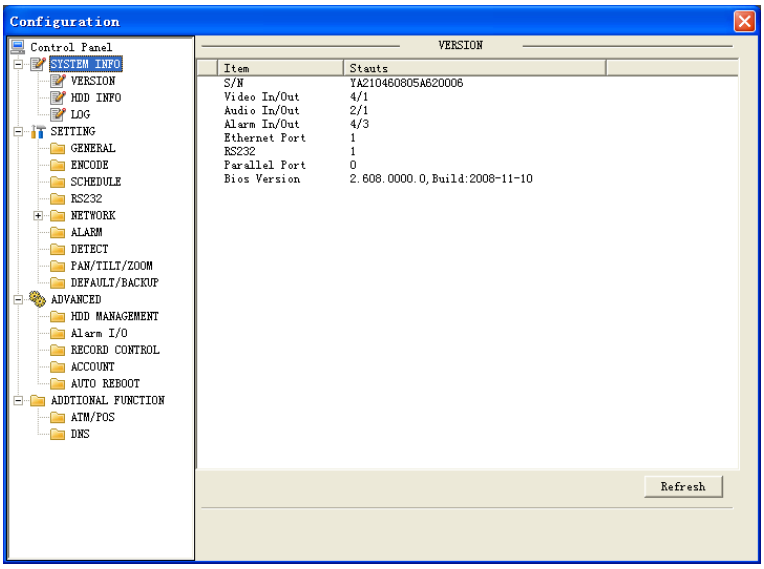


Figure 7-23

- **Version**

Click version button, you can see corresponding HDD information and system information for your reference. See Figure 7-24.

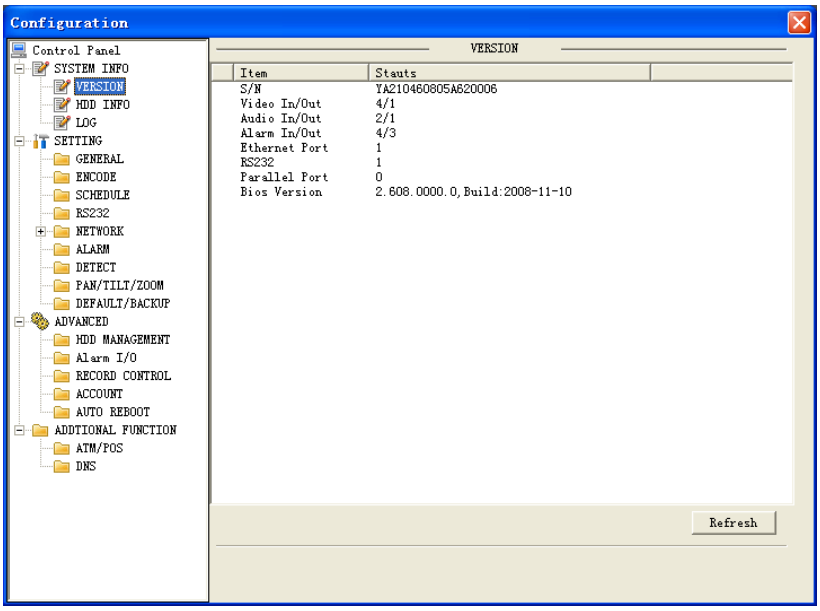


Figure 7-24

- **HDD Information**

Here you can view HDD amount, HDD status, total volume and free space. See Figure 7-25.

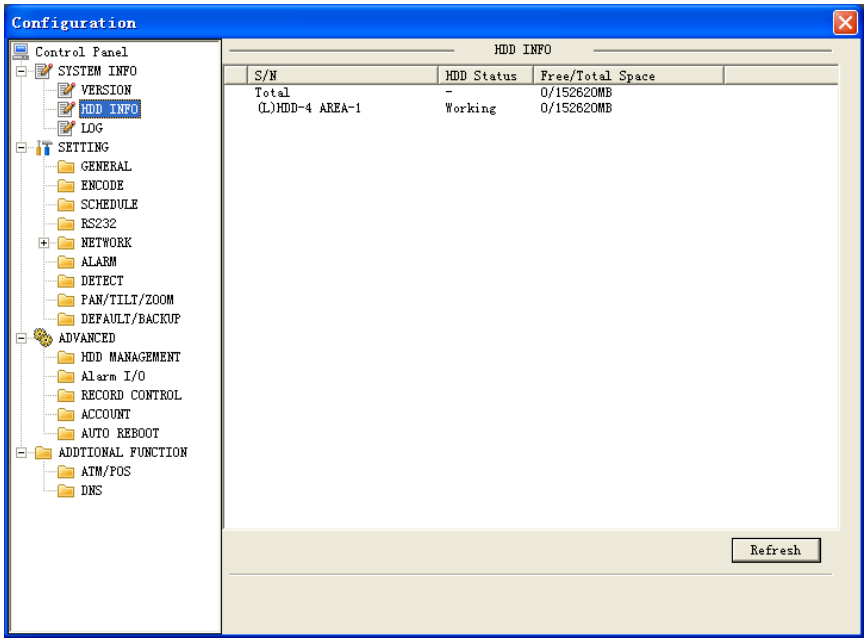


Figure 7-25

- **Log**

Click log button, you can see an interface is shown as in Figure 7-26. Here you can view current device log information.

You can select corresponding log type from the dropdown list and then click search button to view.

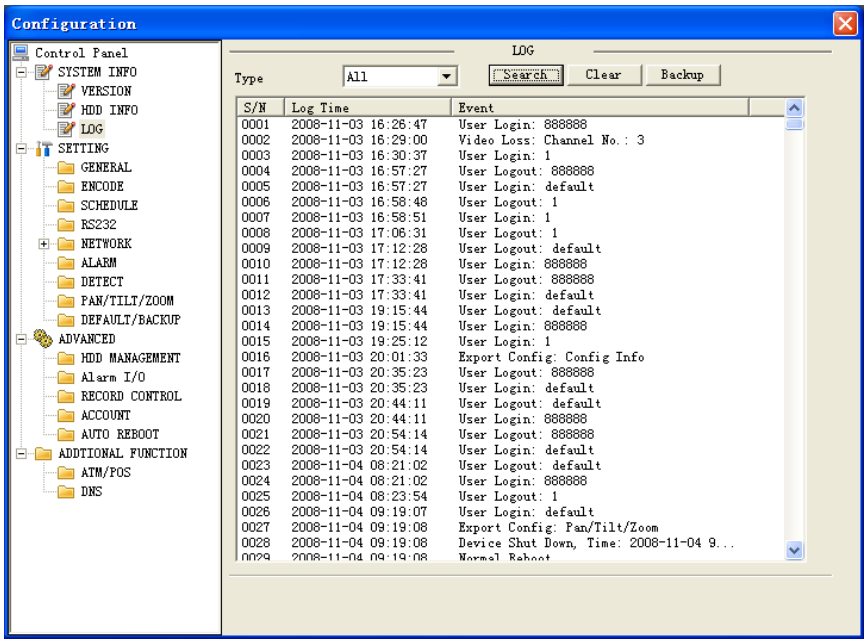


Figure 7-26

7.3.2 Setting

Setting includes the following items:

- ✧ General
- ✧ Encode
- ✧ Schedule
- ✧ RS232
- ✧ Network
- ✧ Alarm
- ✧ Detect
- ✧ Pan/Tilt/Zoom
- ✧ Default/backup

- **General**

General interface is shown as in Figure 7-27.

- ✧ System time: Here is for you to modify system time. Please click Save after your modification
- ✧ Data format: Here you can select data format from the dropdown list.
- ✧ Data separator: Please select separator such as – or /.
- ✧ Time format: there are two options: 24-H and 12-H.
- ✧ HDD full: there are two options: stop recording or overwrite the previous files when HDD is full.
- ✧ Pack duration: Here you can select file size. Default setup is 60 minutes.
- ✧ Device No.: when you are using one remote control to manage multiple DVRs, you can give these DVRs serial numbers respectively. Click address button in your remote control and then input the correct device number, now you can control the DVR now.
- ✧ Video standard: PAL. (For your reference only)

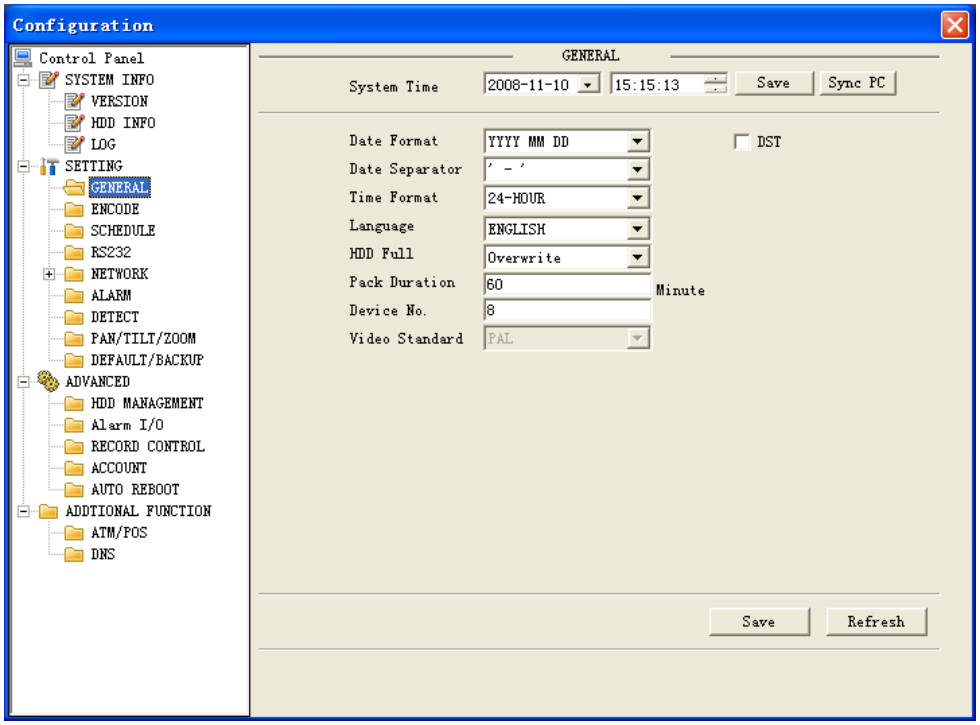


Figure 7-27

- **Encode**

Encode setup includes the following items. See Figure 7-28.
Here you can select

- ✧ Channel: Here is for you to select a channel.
- ✧ Channel name: Modify channel name.
- ✧ Data stream: Regular and extra data stream.
- ✧ Video/Audio. System only displays video by default. You need to manually enable audio function.
- ✧ Bit rate: There are two options: CBR and VBR. You can only set video quality in VBR mode.
- ✧ Frame rate: The value ranges from 1f/s to 25f/s (PAL) and 1f/s to 30f/s (NTSC).
- ✧ Compression: There are two options: H.264 and MPEG 4.
- ✧ Resolution: D1/HD1/DCIF/CIF
- ✧ Quality: The value ranges from 1 to 6. The level 6 is the best video quality.
- ✧ Color setting: you can set brightness /contrast ness /saturation/hue. The value ranges from 0 to 100. Default value is 50.
- ✧ Cover area: here you can set privacy mask zone position. System supports max 8 zones.
  - ➢ Preview means current zone can not be seen in preview status.
  - ➢ Monitor means current zone can not be seen in monitor status.
  - ➢ All means current zone can be seen in neither preview nor monitor.
- ✧ Time display: Here you can enable time title display function.
- ✧ Channel display: Here you can enable channel title display function.

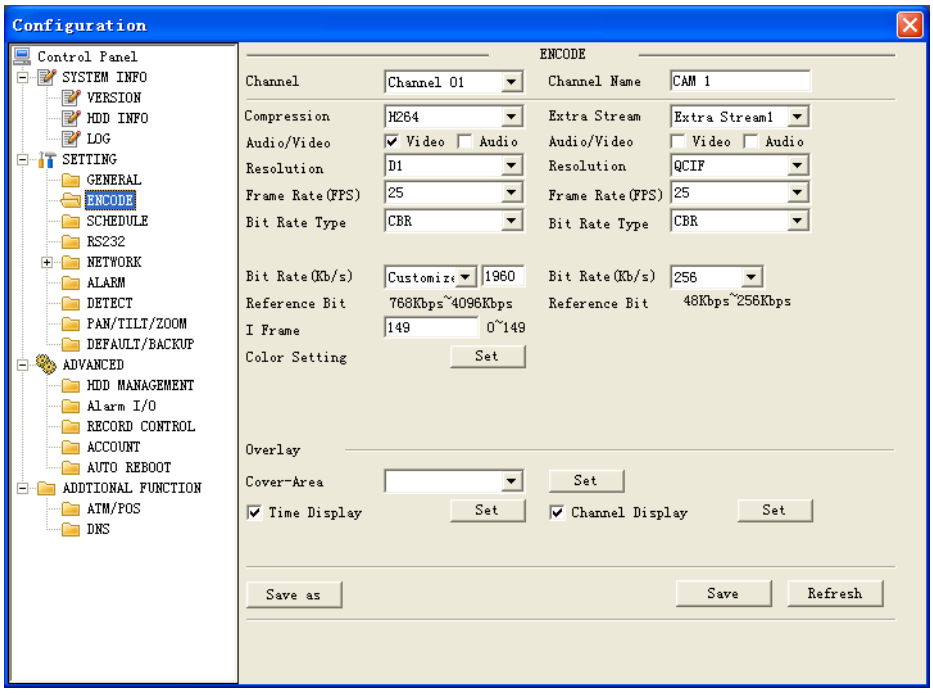


Figure 7-28

- **Schedule**

Schedule includes the following interface. See Figure 7-29.

When DVR boots up, it is in 24-hour continuous record. In this interface you can set record type, record time and period. Record type includes regular record(R), motion detection record (M) and alarm record (A).

- ✧ Channel: select the channel number you desire.
- ✧ Prerecord: system can record the three to five seconds video before activating the record operation into the file.(Depends on data size)
- ✧ Period: There are six periods for you to set. Please click set button of the corresponding period. See Figure 7-30.Please note all the setup here shall be in one day. E.g. 00.00 to 24.00.

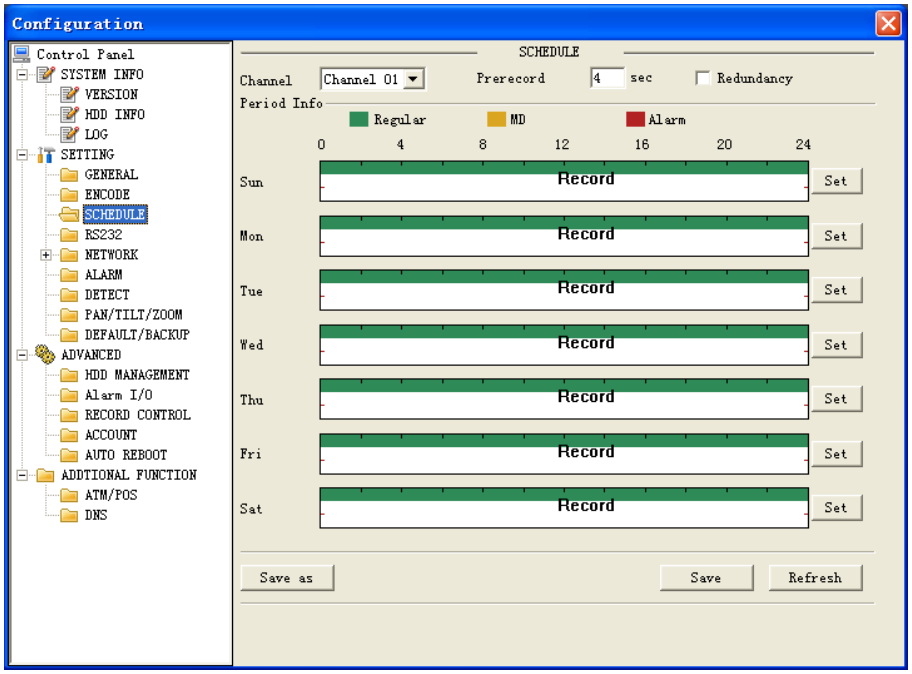


Figure 7-29

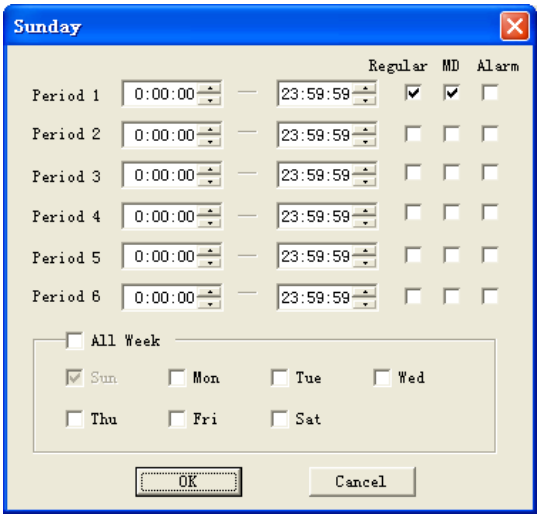


Figure 7-30

Tip:

After you finished setup for one channel, you can click “save as” button, system pops up the following interface. See Figure 7-31.Now you can copy one channel setup to other channels.

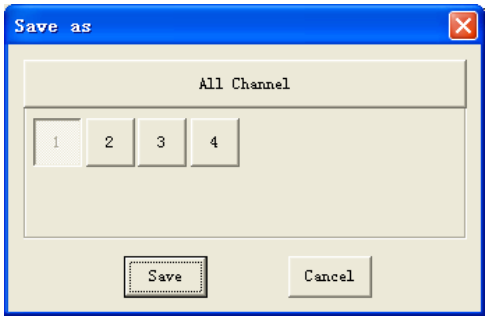


Figure 7-31

- **Network**

Network interface is shown as in Figure 7-32.

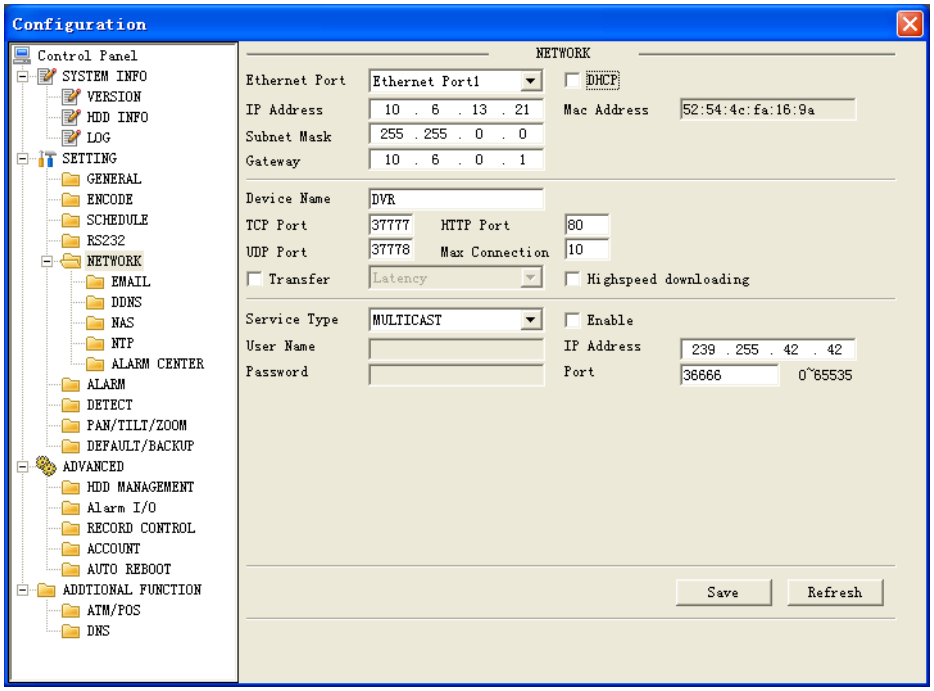


Figure 7-32

This interface includes the following items:

Max address: Here you can set max connection amount. The value ranges from 0 to 10. 0 means no network connection is allowed.

TCP port: default setup is 37777. Please note port 37778 is for network UDP port use only.

HTTP port: default setup is 80.

Transfer: here you can select the priority between fluency/video quality.

✧ **PPPoE**

In remote item, enable PPPoE function and then input “PPPoE name” and “PPPoE password” you get from your ISP (Internet service provider). See Figure 7-33.

Click save button, you need to restart to activate your configuration.
After rebooting, DVR will connect to internet automatically. The IP displayed in the IP address item is the dynamic value. You can use client-end software to visit current IP now.

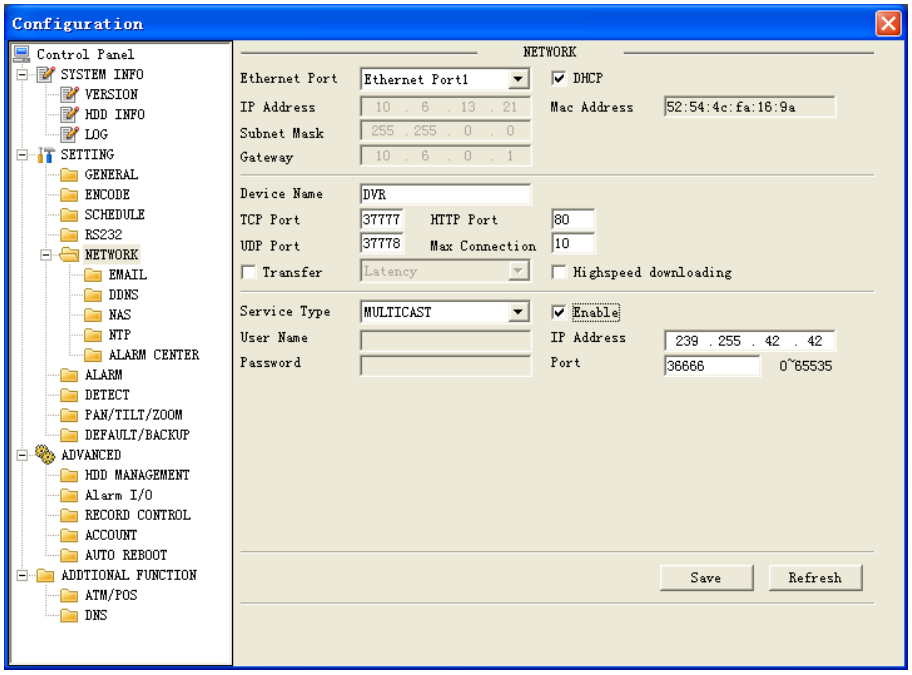


Figure 7-33

✧ **NAS**

Here you need to input host IP, user name, password, port and etc. See Figure 7-34. You can click set button after each date to set periods. See Figure 7-35.

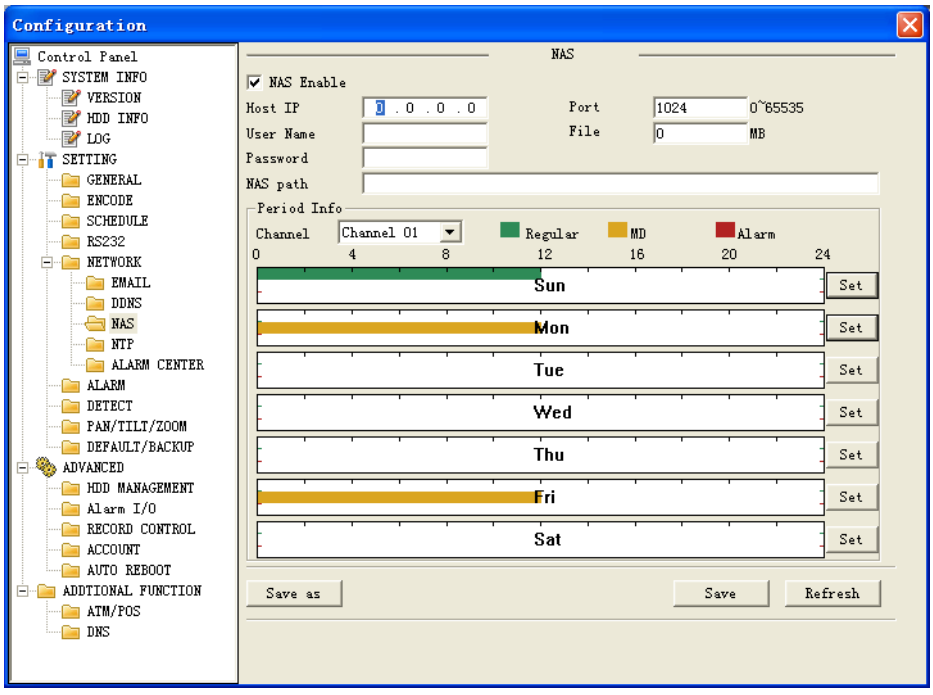


Figure 7-34

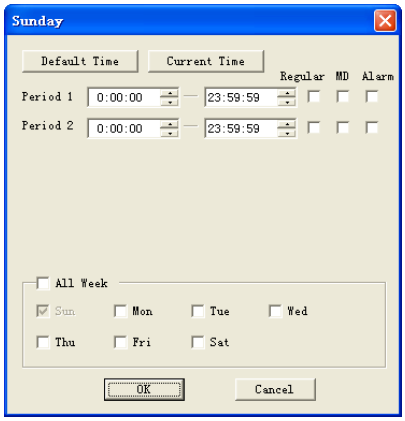


Figure 7-35

✧ **Email**

Here you can input email server information. See Figure 7-36.
Note you can get the server IP from your ISP or Ping email SMTP.
Please use semicolon to separate the email addresses.

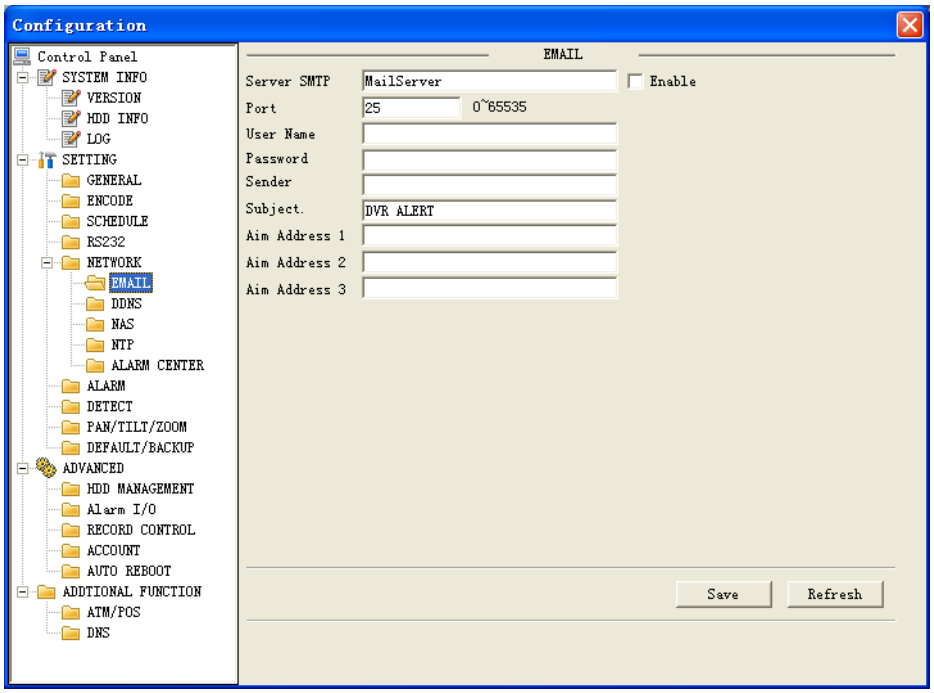


Figure 7-36

✧ **NTP**

In the LAN, you need to install a SNTP server in the PC. For MS XP OS, you can use net start w32time to boot up/
If you are in the internet, you can follow the above mentioned steps. But pleas note you still need a SNTP server.

In Figure 7-37, you need to input server IP, port and update interval. You can select time zone from the dropdown list. Please refer to the following sheet.

City /Region Name	Time Zone
London	GMT+0
Berlin	GMT+1
Cairo	GMT+2
Moscow	GMT+3
New Deli	GMT+5
Bangkok	GMT+7
Beijing (Hong Kong)	GMT+8
Tokyo	GMT+9
Sydney	GMT+10
Hawaii	GMT-10
Alaska	GMT-9
Pacific Time(P.T)	GMT-8
American Mountain Time(M.T)	GMT-7
American Central Time(C.T)	GMT-6
American Eastern Time(E.T)	GMT-5
Atlantic Time	GMT-4
Brazil	GMT-3
Middle Atlantic Time	GMT-2

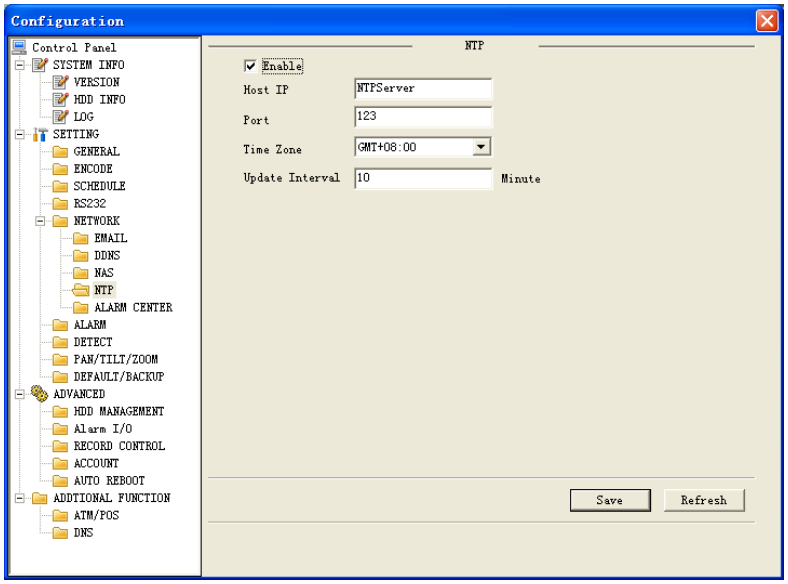


Figure 7-37

✧ **Enable DDNS**

You need a PC of fixed IP in the internet and there is the DDNS software running in this PC. In other words, this PC is a DNS (domain name server).see Figure 7-38.

Please enable DDNS function and then input PC IP. Click save button and then reboot device. Now you can login via DDNS. Please open IE and then input http：//(DDNS server IP)/ DDNServer / default.htm. for example, input http：//10.5.2.149/DDNServer/default.htm, you open a DDNS server web page.

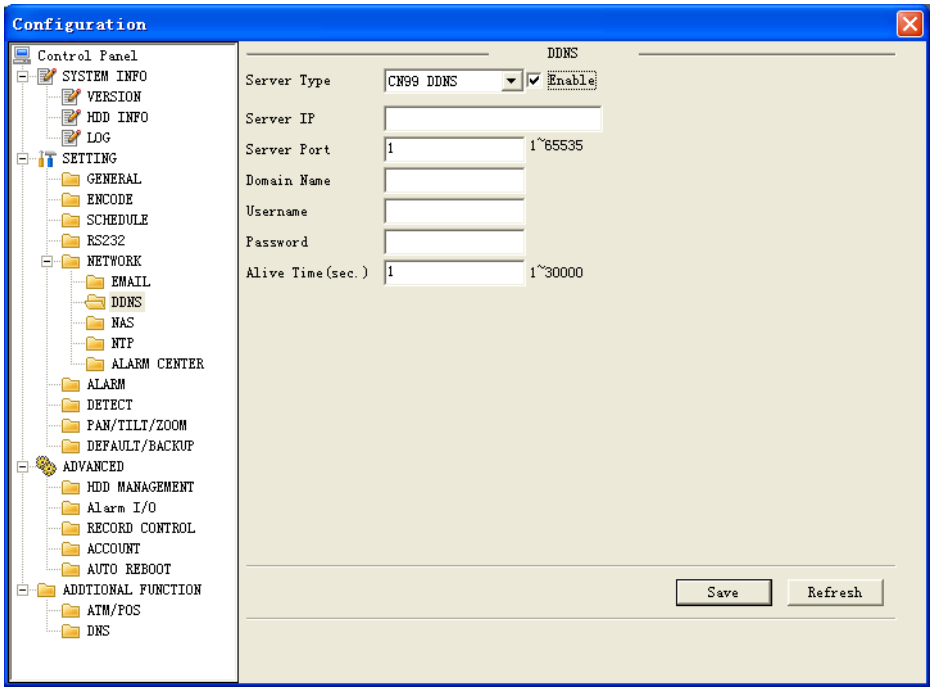


Figure 7-38

✧ **Alarm Centre**

Alarm centre is shown as in Figure 7-39.

You can click enable button to activate alarm centre function.

Then you can input host I, port and set schedule time.

System can alert you when there is an alarm.

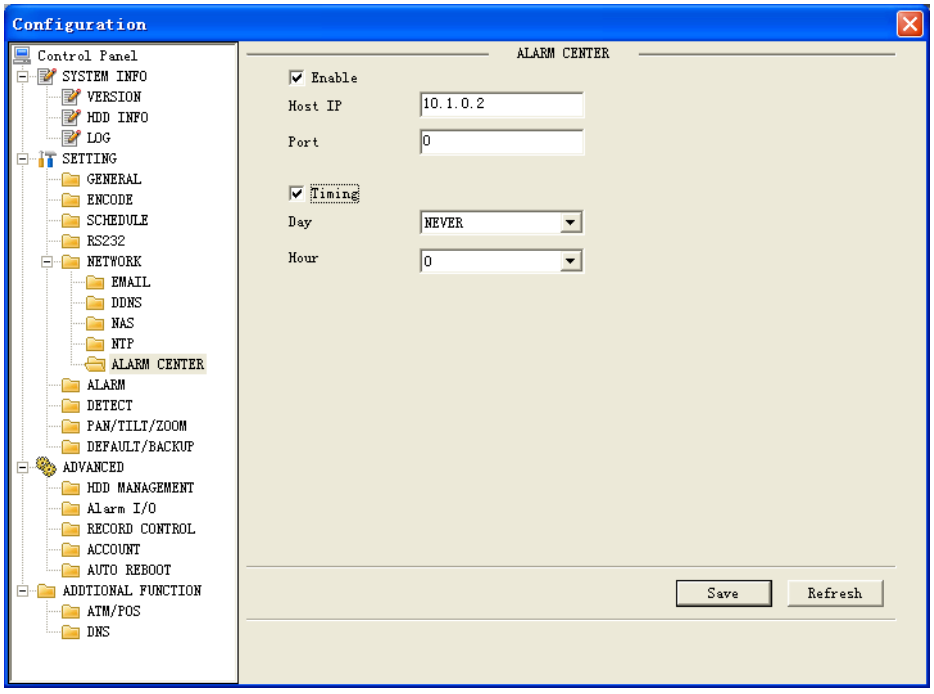


Figure 7-39

- **RS232**

RS232 includes the following items. See Figure 7-40.

- ✧ Function: There are various devices for you to select. Console is for serial port or min-end platform to upgrade program. Keyboard is for you to use special keyboard to control current device.
- ✧ Baud rate: Please select as you desire.
- ✧ Data bit: The value ranges from 5 to 8.
- ✧ Stop bit: There are two options: 1/2.
- ✧ Parity: There are three options: none/odd /even.

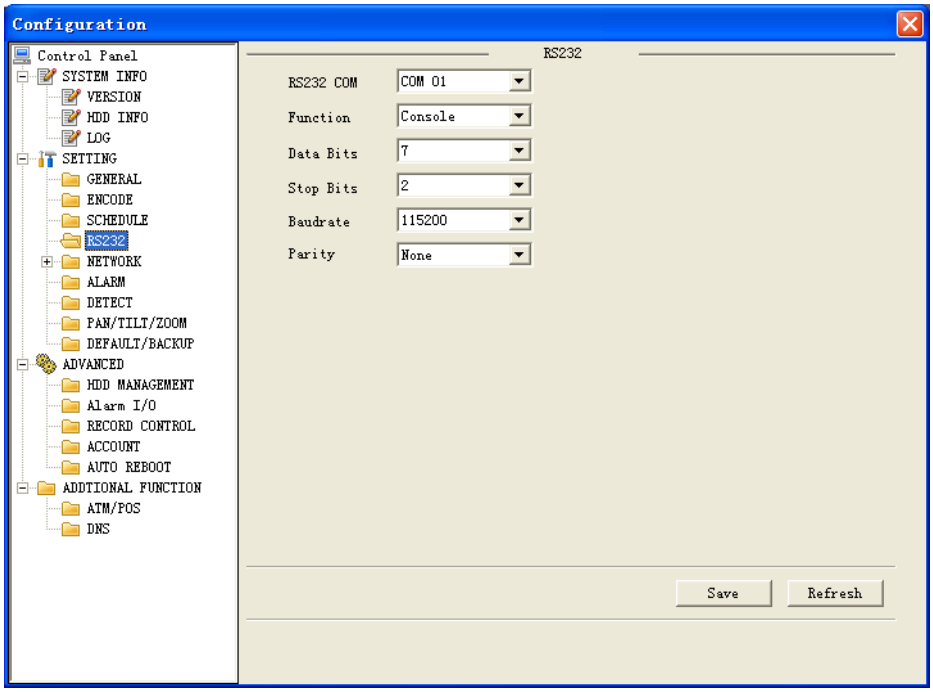


Figure 7-40

- **Alarm**

Please note before alarm setup, you need to properly connect alarm input and output device, send address and receive address. Click save button confirm current setup. Alarm setup includes the following items. See Figure 7-41.

- ✧ Event Type: you can select event type from the drop down list: Local alarm/Net alarm.
- ✧ Alarm in: Select corresponding alarm in channel
- ✧ Type: There are two options: normal open and normal close.
- ✧ Record channel: select record channel when alarm occurs. Please note you need to select alarm record in DVR schedule interface and enable schedule function in manual record interface.
- ✧ Anti-dither: system support anti-dither function. The value ranges from 0 to 15 seconds.
- ✧ Alarm latch: After alarm completes, system can still alarm for the specified time. The value ranges from 10 to 300 seconds.

- ✧ Record latch: After motion detection completes, system can still record for the specified time. The value ranges from 10 to 300 seconds
- ✧ Email: System can send out email to alert you when alarm occurs.
- ✧ PTZ activation: Here you can set PTZ movement when alarm occurs. Such as go to preset x when there is an alarm. Click set button, the interface is shown as in Figure 7-42.
- ✧ Tour: Here you can enable tour function when alarm occurs. System supports multiple-window tour. Please go to chapter 5.3.9 Display for tour interval setup.

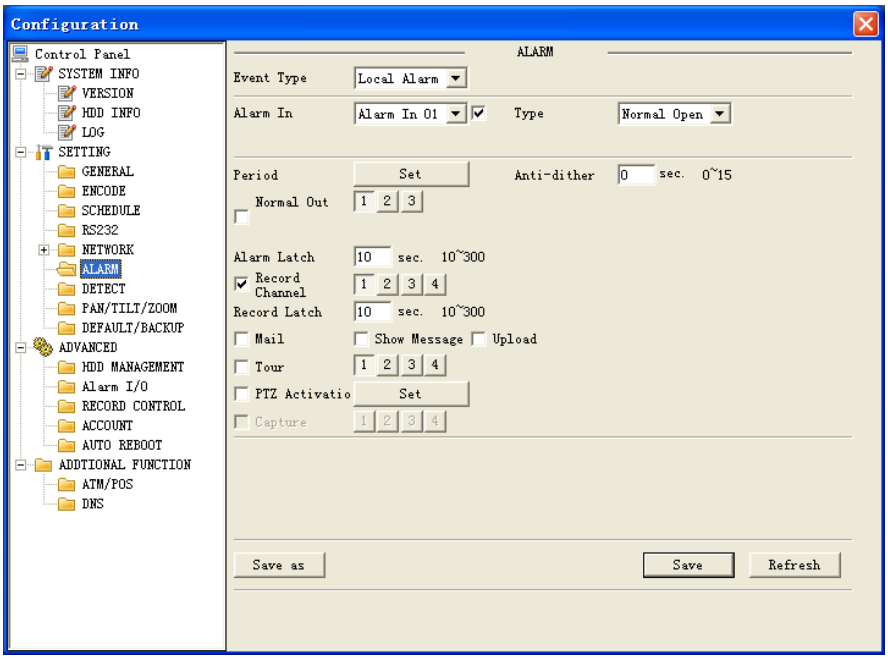


Figure 7-41

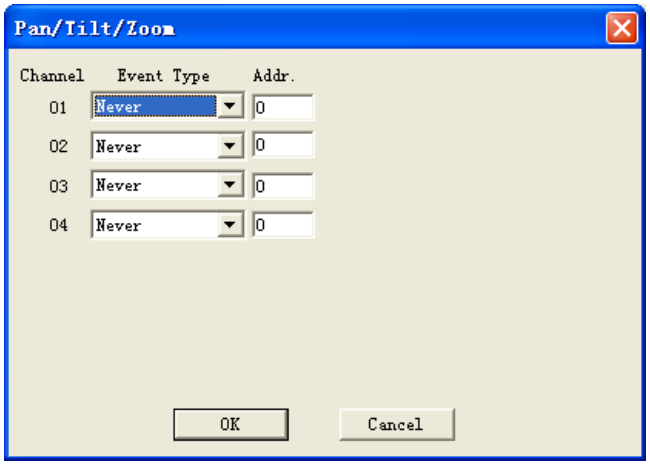


Figure 7-42

- **Detect**

Detect interface is shown as in Figure 7-43.

Here includes the following items:

- ✧ Channel: Select channel name from the dropdown list.
- ✧ Type: There are three types: motion detection/Video loss/Camera mask detection.

- Record channel: Here you can select record channel (Multiple choices). Please make sure you have set MD record in encode interface(Main Menu->Setting->Schedule) and schedule record in manual record interface(Main Menu->Advanced->Manual Record)
- Period: Here is for you to set record period. Click set button, you can see an interface is shown as in Figure 7-44. In Figure 7-44, click time set button, you can see an interface is shown as in Figure 7-45. Here you can set time period.
- Sensitivity: There are six levels. The sixth level has the highest sensitivity.
- Region: If you select motion detection type, you can click this button to set motion detection zone. The interface is shown as in Figure 7-46. There are PAL22X18/NTSC22X15 zones. Right click mouse you can go to full-screen display mode. Do remember clicking OK button in Figure 7-46 to save your motion detection zone setup.
- Anti-dither: system support anti-dither function. The value ranges from 0 to 15 seconds.
- Alarm latch: After alarm completes, system can still alarm for the specified time. The value ranges from 10 to 300 seconds.
- Record latch: After motion detection completes, system can still record for the specified time. The value ranges from 10 to 300 seconds
- Mail: system can send out email to alert you when alarm occurs.
- Tour: Here you can enable tour function when alarm occurs in corresponding channel. System supports multiple-window tour. Please go to chapter 5.3.9 Display for tour interval setup.
- PTZ activation: Click set button, you can see an interface is shown as in Figure 7-47. System can go to corresponding preset when alarm occurs.

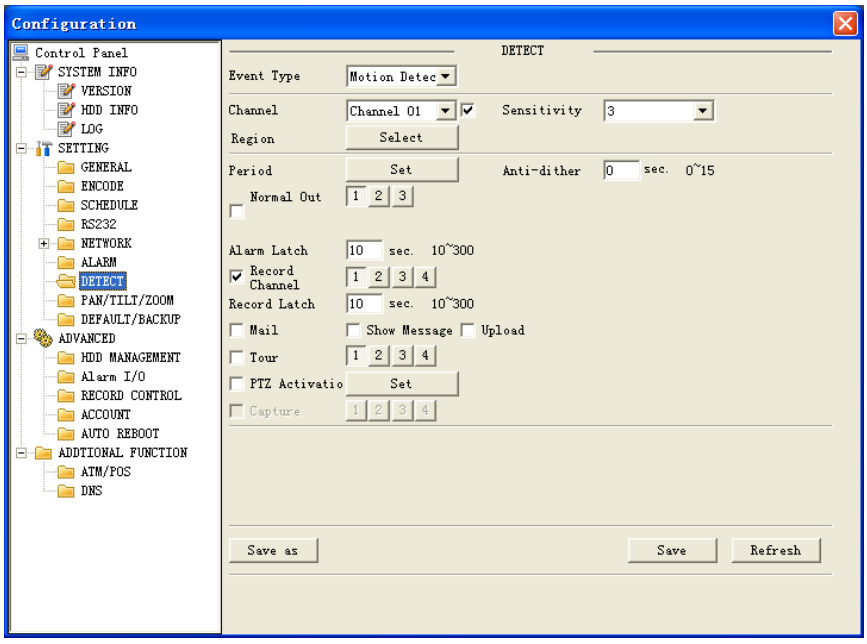


Figure 7-43

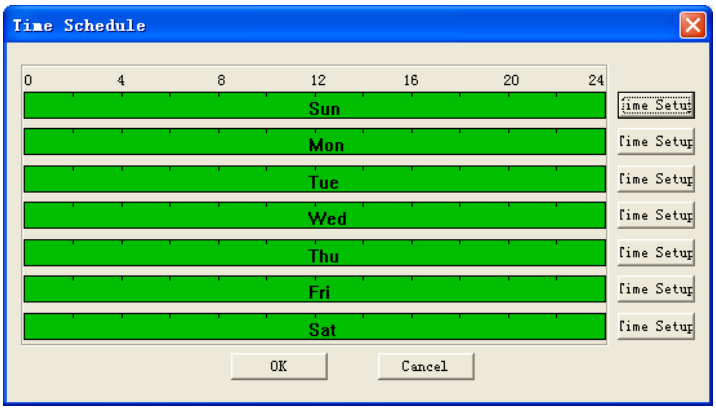


Figure 7-44

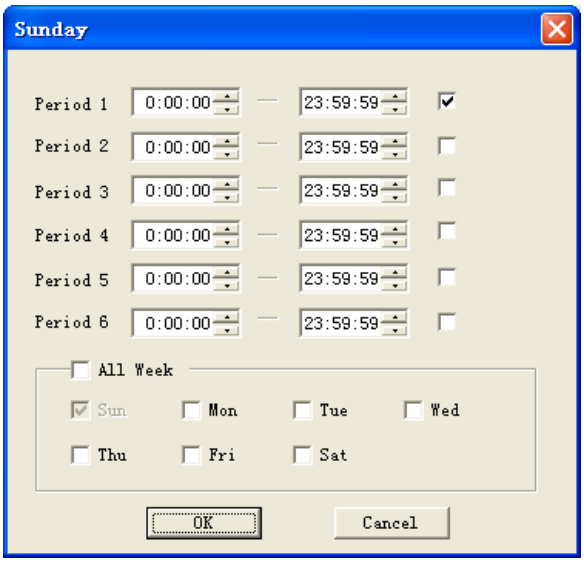


Figure 7-45

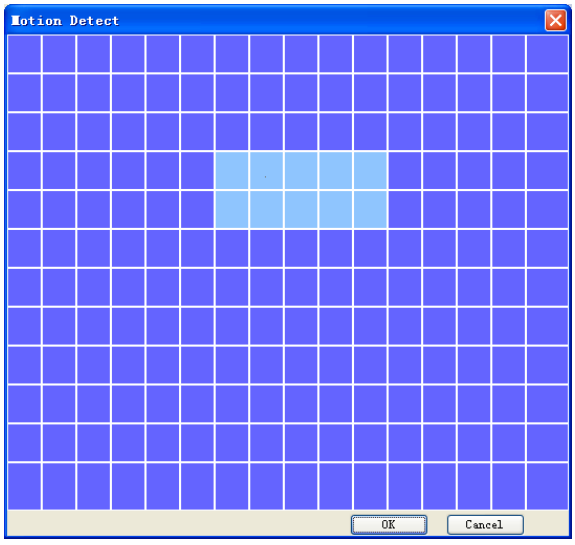


Figure 7-46

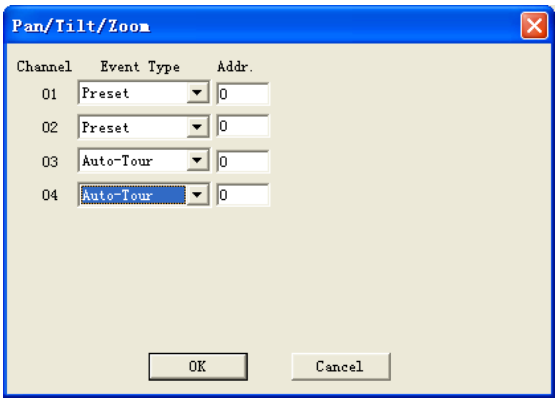


Figure 7-47

- **Pan/Tilt/Zoom**

Pan/Tilt/Zoom interface is shown as in Figure 7-48.

Please note you have properly set dome address and all connections are right.

- ✧ Channel: Select the dome connected channel.
- ✧ Protocol: select the corresponding dome protocol.(such as Pelco)
- ✧ Address: Set corresponding dome address. Default value is 1. Please note your setup here shall comply with your dome address; otherwise you can not control the speed dome.
- ✧ Baud rate: Select the dome baud rate. Default setup is 9600.
- ✧ Data bit: Default setup is 8.
- ✧ Stop bit: Default setup is 1.
- ✧ Parity: Default setup is none.
- ✧ Matrix ID: Default value is 0. The value ranges from 0 to 255.

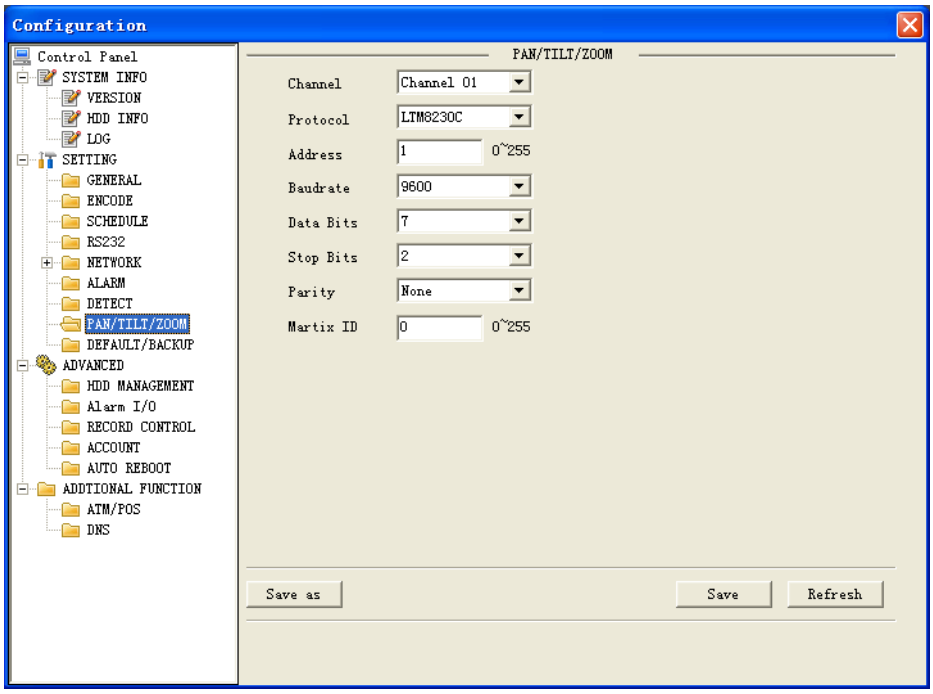


Figure 7-48

- **Default/backup**

This function allows you to export or import corresponding information. See Figure 7-49.

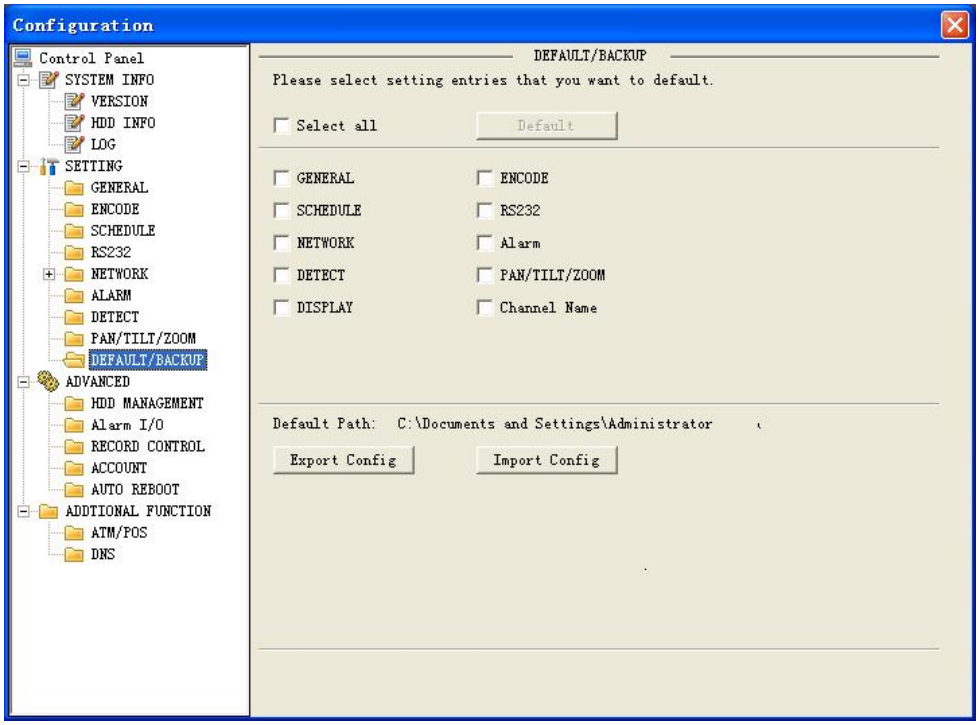


Figure 7-49

7.3.2.1 Advanced

Advanced includes the following items. See Figure 7-50.

- ✧ Account
- ✧ HDD management
- ✧ Alarm I/O
- ✧ Record control
- ✧ Auto reboot

- **Account**

Account interface is shown as in Figure 7-50. Here you can add/delete user, add/delete group, modify user or group right, modify user password.

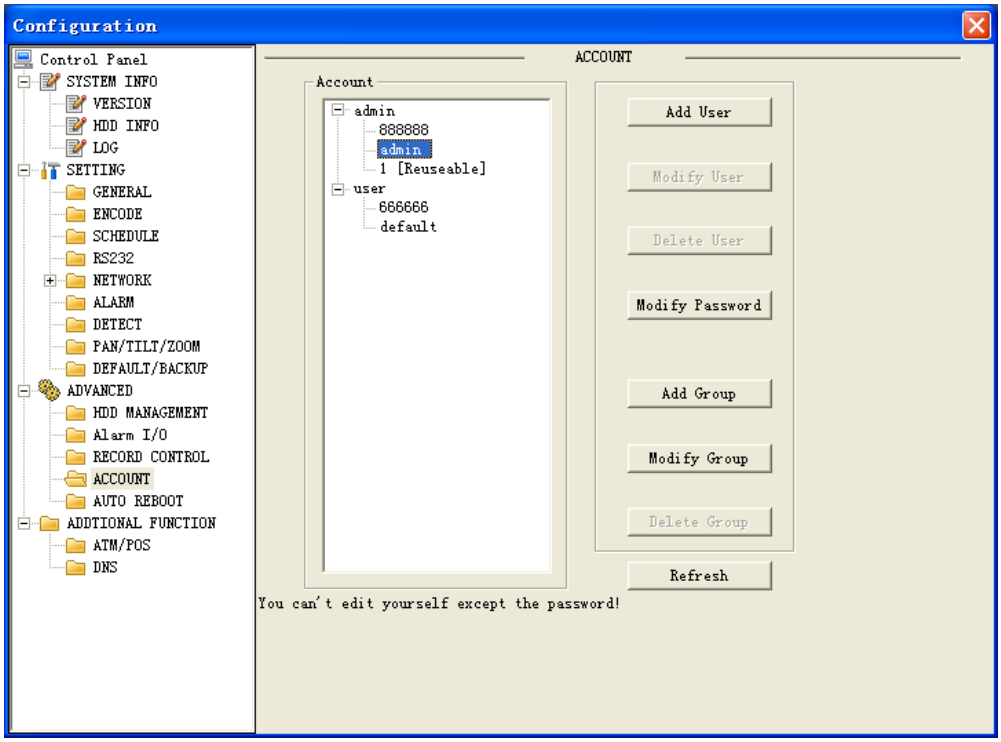


Figure 7-50

Click add group button, you can see the following interface. See Figure 7-51.
Here you can add one new group, and then select corresponding rights for the whole group accounts.

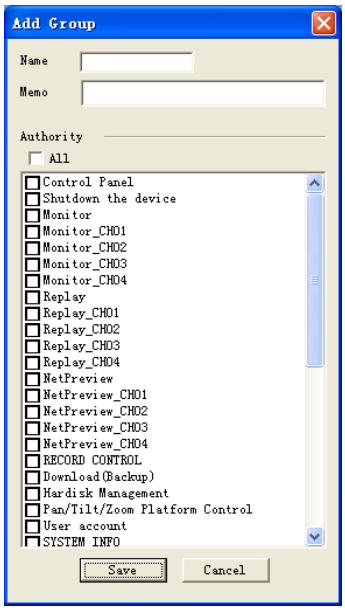


Figure 7-51

Click add user button, you can see the following interface. See Figure 7-52.
Here you can input a new user and then select corresponding rights.
Please note one user must belong to one group and user right shall not exceed group rights limit.

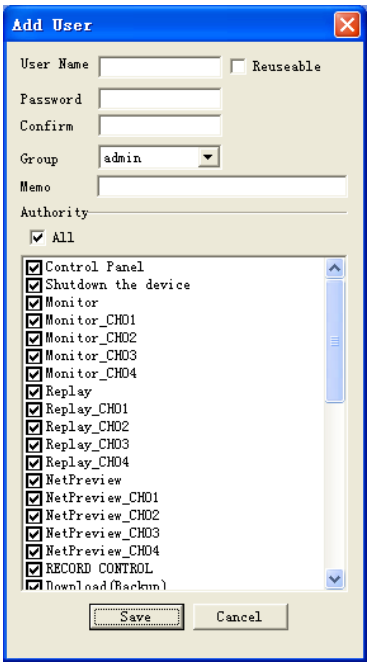


Figure 7-52

- **Record Control**

Record control interface is shown as in Figure 7-53. Here you can enable record status for corresponding channel.

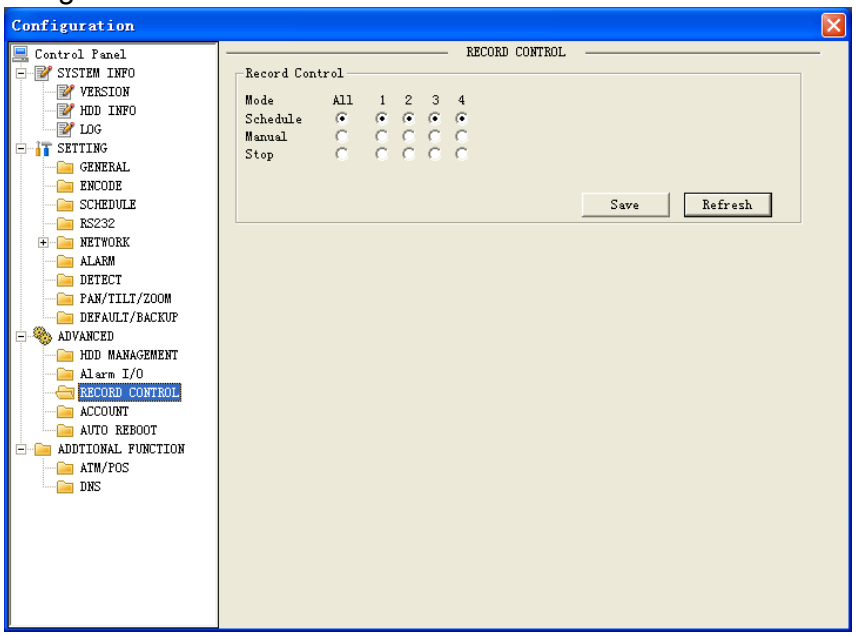


Figure 7-53

- **HDD management**

This function needs DVR device supported.

Please select the HDD first and then you can see the items on your right become valid. You can check the corresponding item here. See Figure 7-54.

After you completed setup, please click control execute button, you can see the DVR begins restarting.

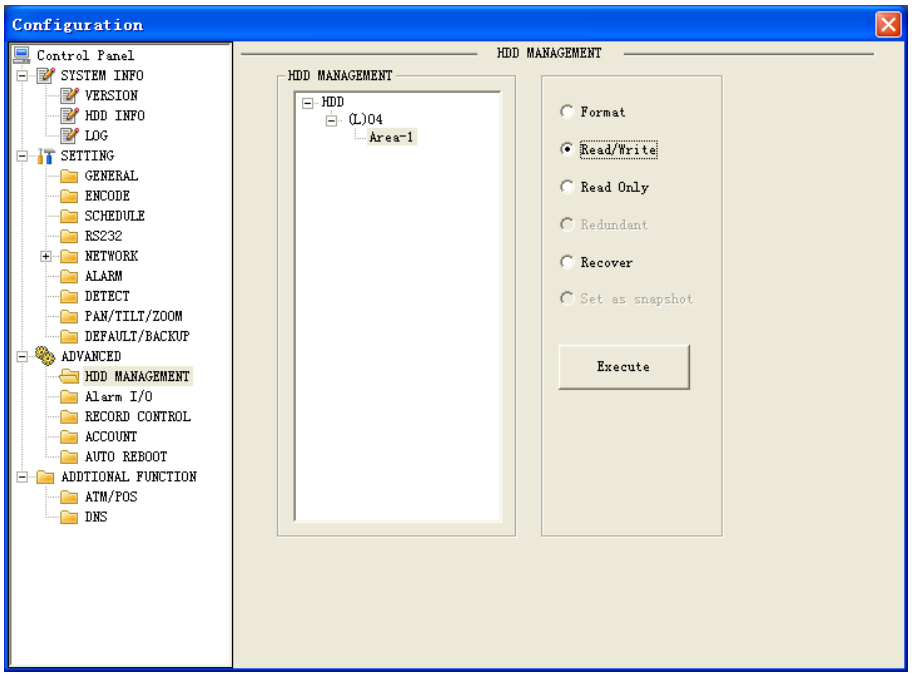


Figure 7-54

- Auto Reboot

System allows you to set auto reboot time. System also support auto delete files function. See Figure 7-55.

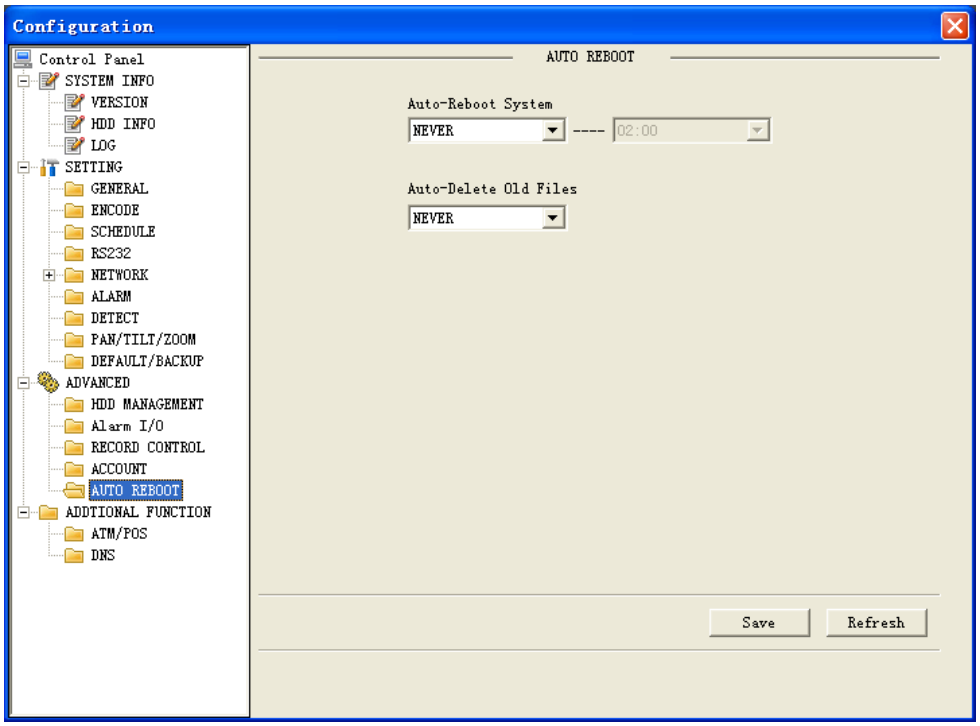


Figure 7-55

- **Alarm I/O**

Here you can select alarm out put channel. See Figure 7-56.

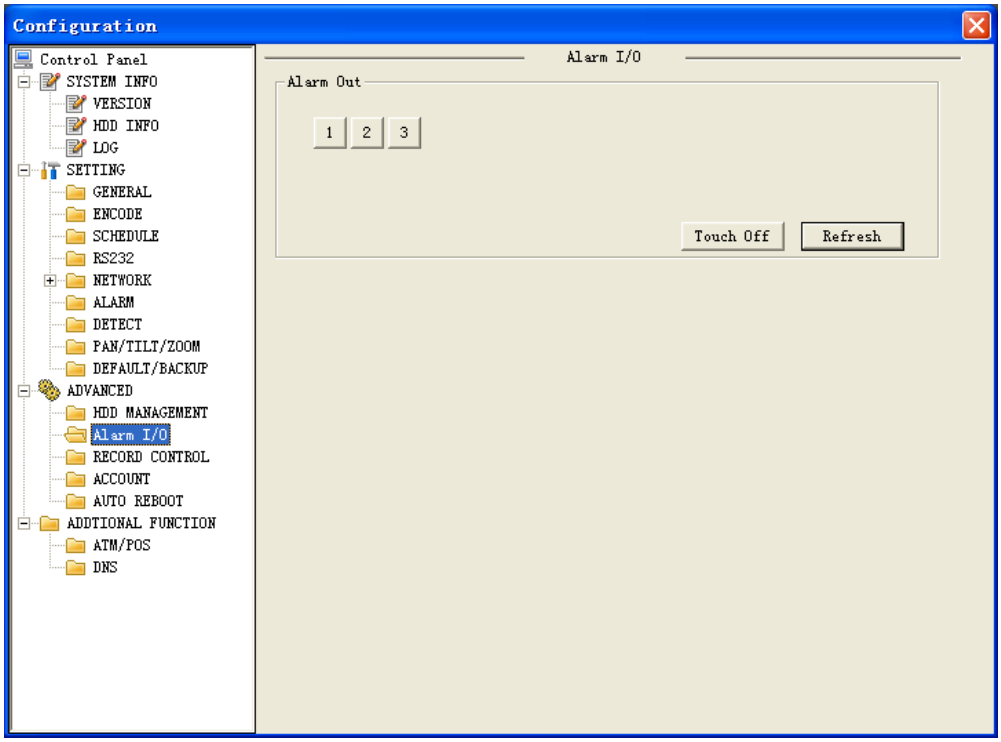


Figure 7-56

7.3.2.2 Additional function

- **DNS**

Here you can set server or local service provider DNS address. See Figure 7-57

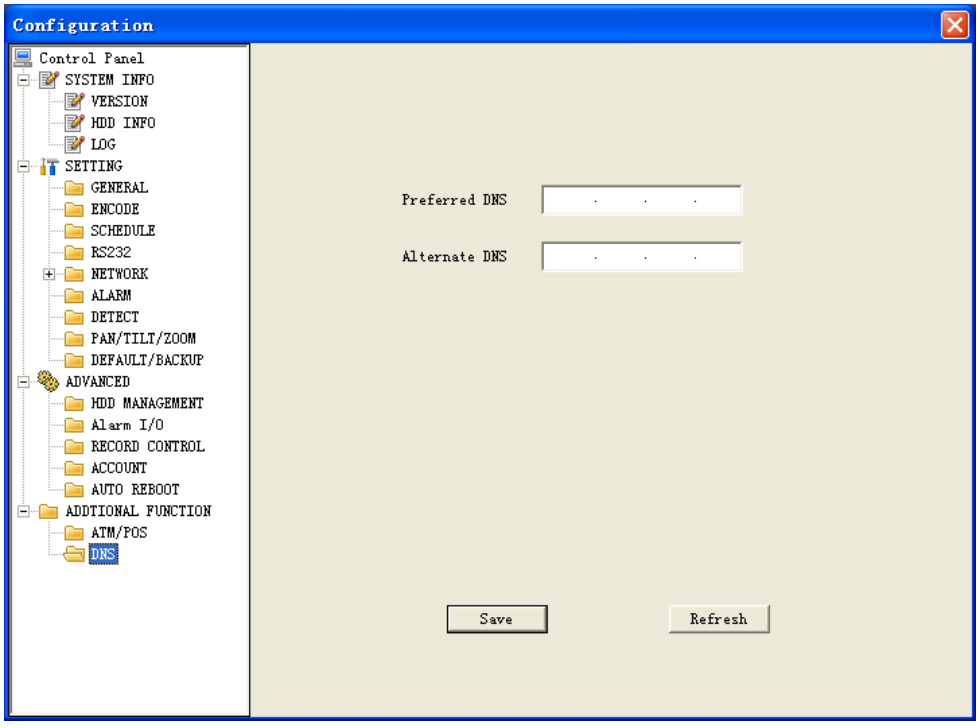


Figure 7-57

7.4 Search

Here you can select video type, channel number and time to search the file you want. Click search button, the interface is shown as below. See Figure 7-58
Please use page up/down key to view the search results.
Double click file name, you can view the file and system will automatically backup the image in you installation directory.

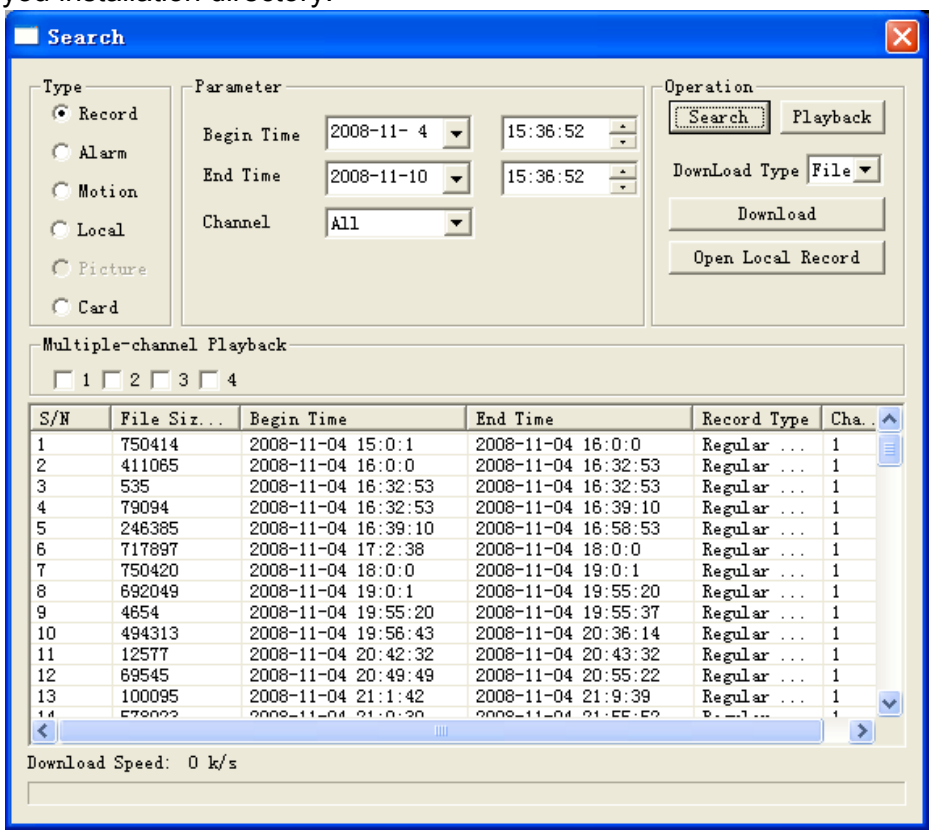


Figure 7-58

In the search result interface, you can select one or more files to download to your local PC.
The playback bar is shown as below. See Figure 7-59.
1: Play
2: Pause
3: Stop
4: Slow play
5: Fast play

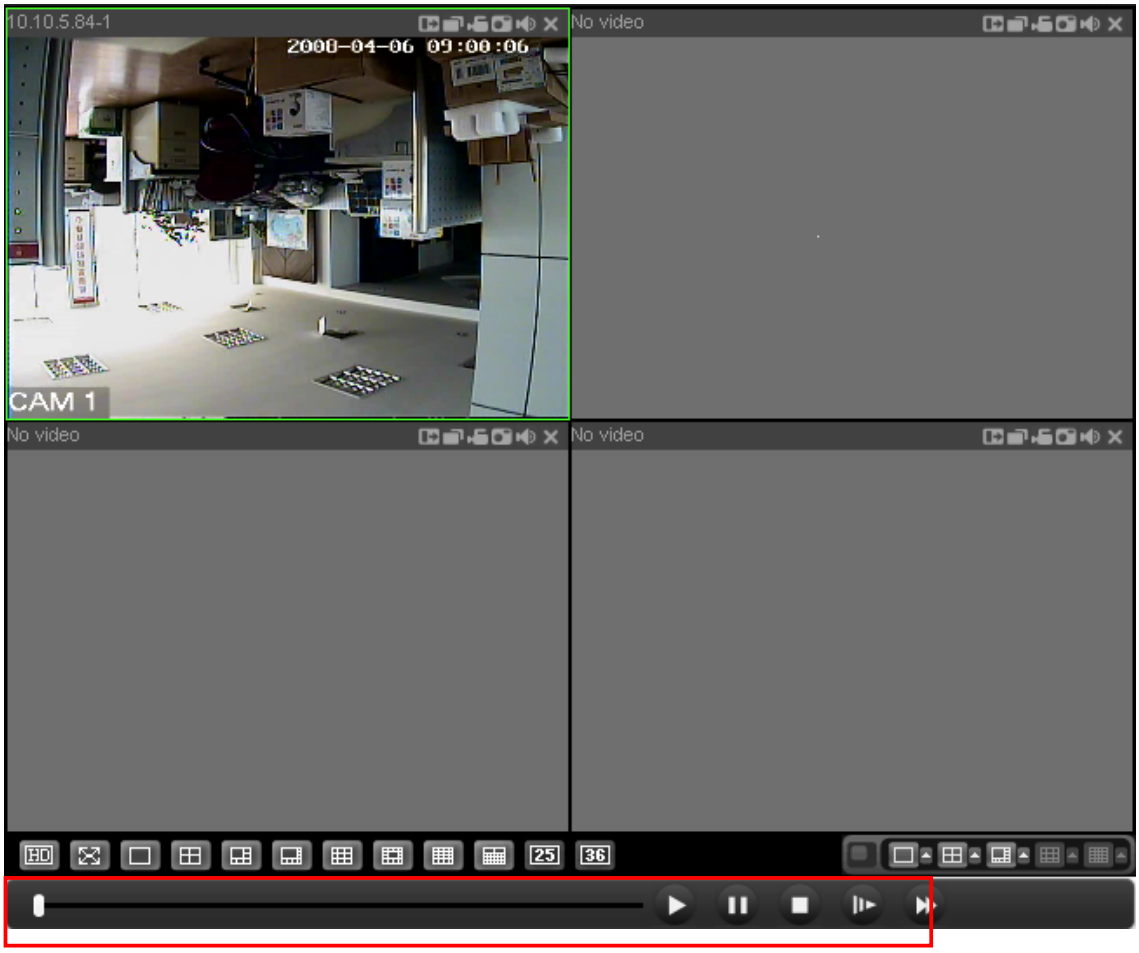


Figure 7-59

7.4.1 Download

You can select one or more files you want to download and then click down load button. System pops up a dialogue box asking you specify directory. See Figure 7-60.

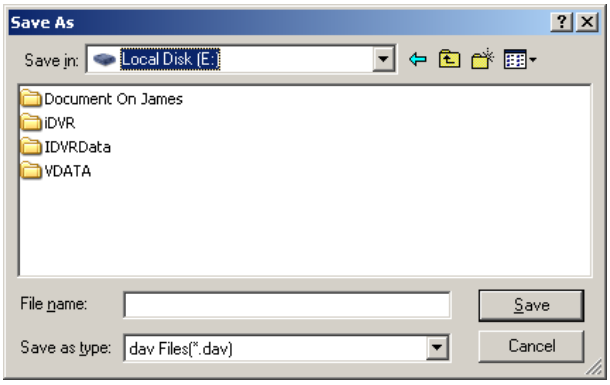


Figure 7-60

Then you can input file name and click save to backup file in your local pc.
During the download process, there is a process bar for you reference and you can see download button becomes stop button. See Figure 7-61.

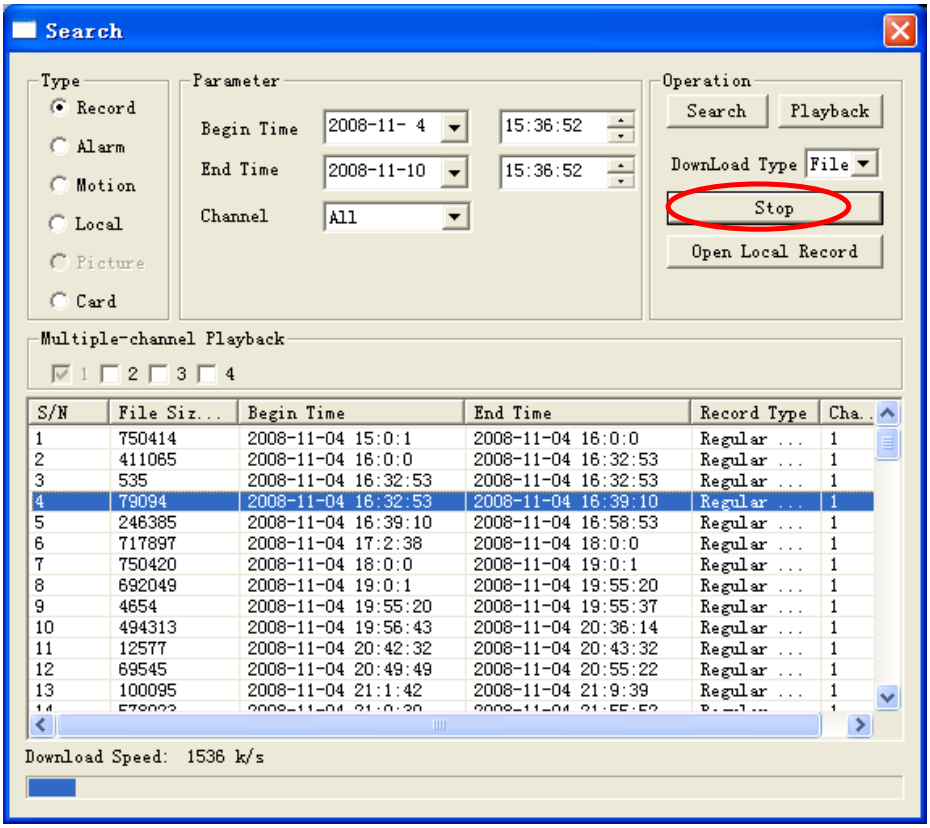


Figure 7-61

7.5 Alarm

Here you can set alarm type and alarm prompt audio file. See Figure 7-62.

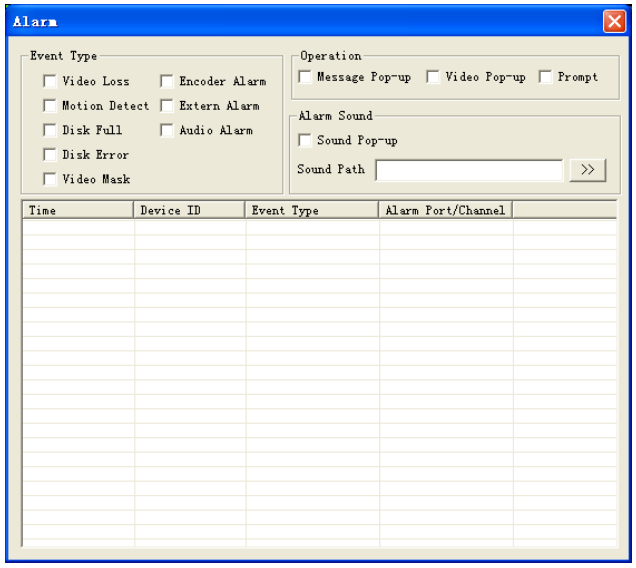


Figure 7-62

7.6 About

Click about button, you can view current web client information. See Figure 7-63.

Figure 7-63

7.7 Log out

Click log out button, system goes back to log in interface. See Figure 7-64.

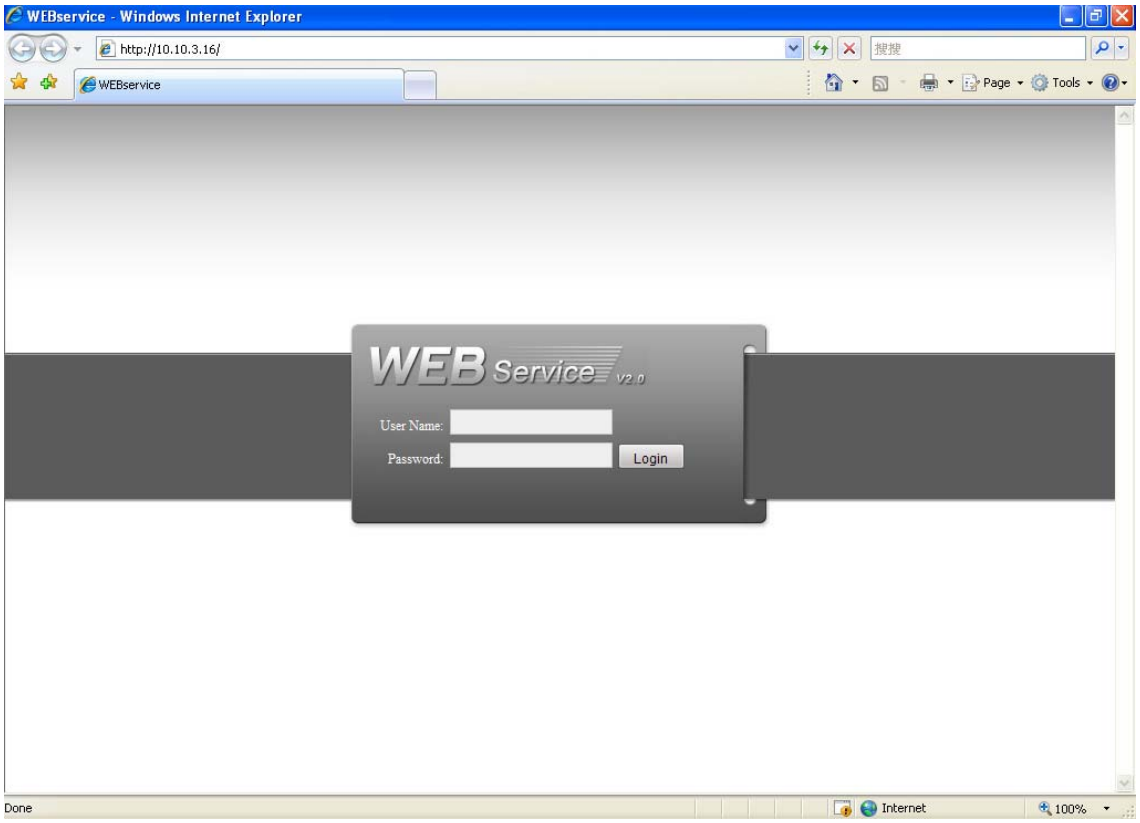


Figure 7-64

7.8 Un-install Web Control

You can use web un-install tool “uninstall web.bat” to un-install web control.

Please note, before you un-installation, please close all web pages, otherwise the un-installation might result in error.

8 Enterprise Professional Surveillance System

In this chapter, we introduce how to add devices and how to enable monitor function. For detailed operation, please refer to enterprise professional enterprise surveillance system user's manual.

8.1 Log in

Double click enterprise profession surveillance platform icon ( ).If it is your first time to use the system, you can see the following interface. See Figure 8-1.

Figure 8-1

After selecting a language, you can see the following interface. Here you can input user name and password to log in you selected server. The log in interface is shown as in Figure 8-2.

If it is your first time to use the system, you need to click add button to add a device first. Default central control server name is Local.

System default username and password both are admin.

Note:

For security reasons please modify your password after you first logged in.

Figure 8-2

8.2 Enable Monitor

After successfully logged in, please select the device and then click connect/disconnect button（ ）.

Select the channel you wan to view, click connect/disconnect button（ ） again.

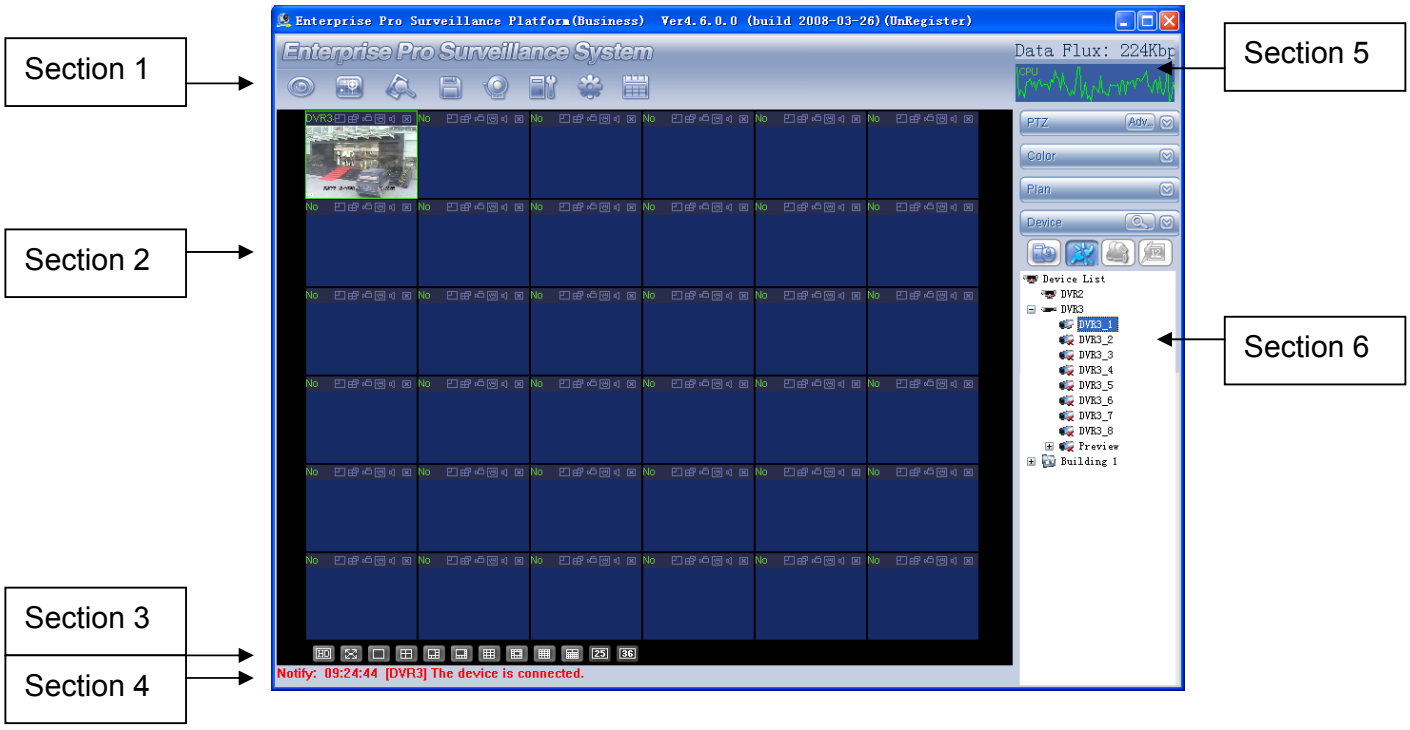


Figure 8-3

There are totally six sections:

- Section 1: There are eight function keys: monitor, E-map, record, save, alarm, configuration, log and system.
- Section 2: Here is for you to view channel video.
- Section 3: Here is for you to select display mode. System supports various display modes. HD item is for you to select priority between real-time and video fluency.
- Section 4: Here is for you to view current help information.
- Section 5: Here is to display data flux and CPU status.
- Section 6: There are four function buttons: PTZ, color, device, and plan. Please note system only supports one window in full-screen. Here we recommend resolution 1024*768.

Select a device name and then click connect/disconnect button, you can connect current device to network. You can see a little red -cross below the name disappeared. Click one window on you left side and then double click channel name on you right hand, you can see the corresponding video in current window.

Please refer to Figure 8-4 for connection/disconnection information.

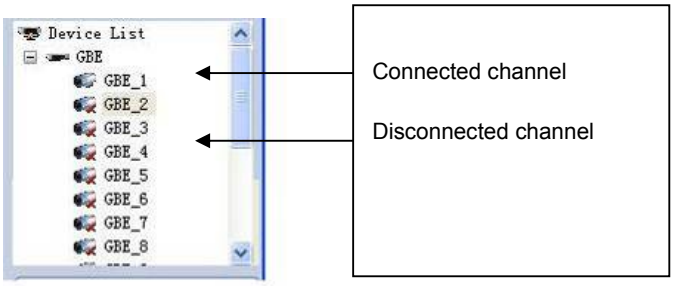


Figure 8-4

8.3 Add New Device

Click configuration button, you can see a network management unit shown as in Figure 8-5.

There are five function buttons, from left to right: device management, user manager, E-map, device configuration and upgrade.

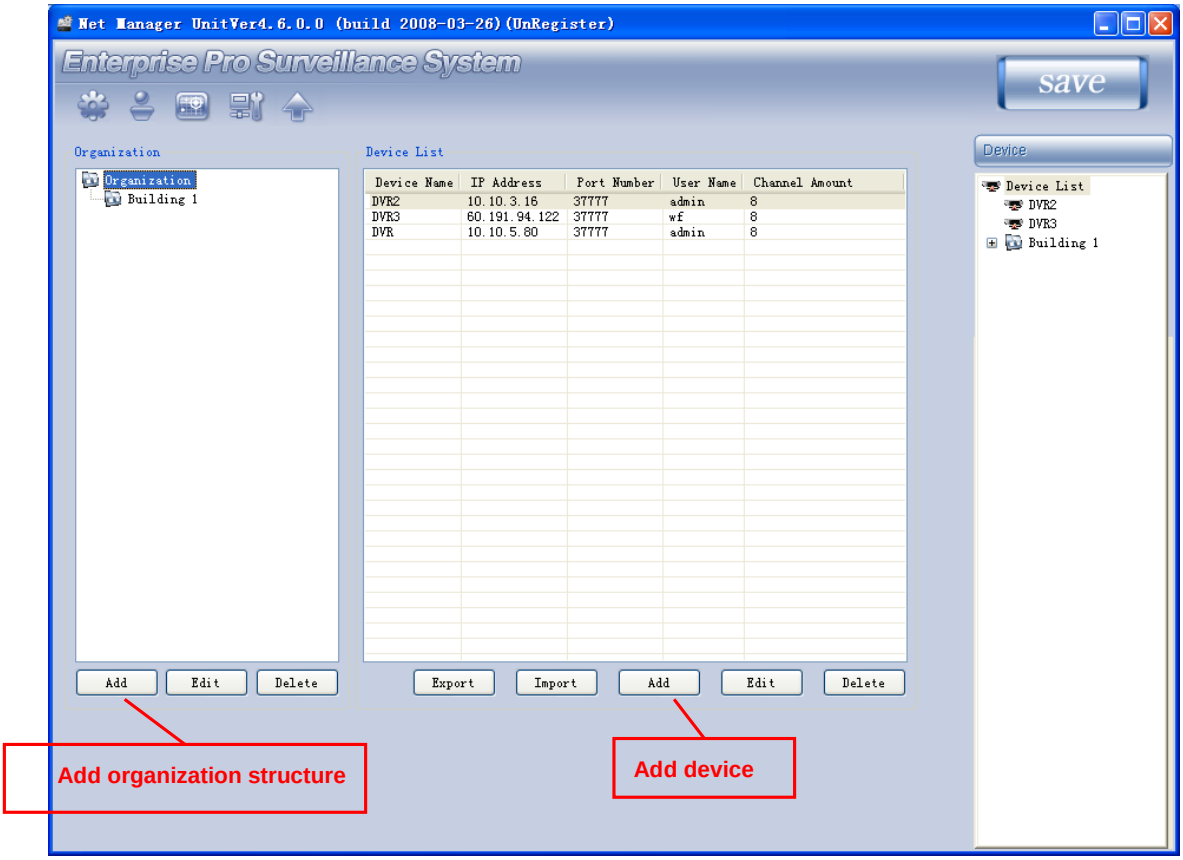

Net Manager UnitVer4.6.0.0 (build 2008-03-26)(UnRegister)
Enterprise Pro Surveillance System
save
Organization
Organization
Building 1
Add
Edit
Delete
Device List
Device Name
IP Address
Port Number
User Name
Channel Amount
DVR2
10.10.3.16
37777
admin
8
DVR3
60.191.94.122
37777
wf
8
DVR
10.10.5.80
37777
admin
8
Export
Import
Add
Edit
Delete
Device
Device List
DVR2
DVR3
Building 1
Add organization structure
Add device

Figure 8-5

.

9 Player Operation

9.1 General Introduction

This player integrates audio play and video play together. It supports most popular audio file and support AVI convert also.

It supports the following file format:

- Proprietary file format(record, snapshot, frame setup).

  *.DAV、 *.MP4 *.264 *.MP1

- Compression format(does not support record and snapshot)

  *.MP4 *.264

- Image format

  JPG & BMP

In player interface, there are following items. See Figure 9-1.

- 1: Frame rate. There are nine options:1f/2f/3f/6f/12f/25f/50f/75f/100f， You can click corresponding pane to select.
- 2 :Play
- 3:Pause
- 4:Stop
- 5 :Start record
- 6: Previous file
- 7:Backward
- 8 Forward
- 9 Next file
- 10: Capture: Here is for you to snapshot important image.
- 11: Sound: + is to increase volume, - is to decrease volume. Click icon “” to turn on or off volume.
- 12: Current frame rate: Here you can view current frame rate.
- 13: Current status: Here you can view play status bar, play mode and volume status (on or off).
- 14: Convert to AVI: System can convert the video file of suffix name such as mp4, Dav, mpeg, 264 to avi format.
- 15: Full-screen: There are two ways: click full-screen button to review in full-screen mode. The other way is to double click current window to review in full-screen.
- 16: Play mode: shuffle or repeat.
- 17: Change language: The player supports two languages: English/Chinese. System pops up dialogue box asking for restarting. Click OK, system automatically restart.
- 18: Parameter setting. You can set parameter setup/.

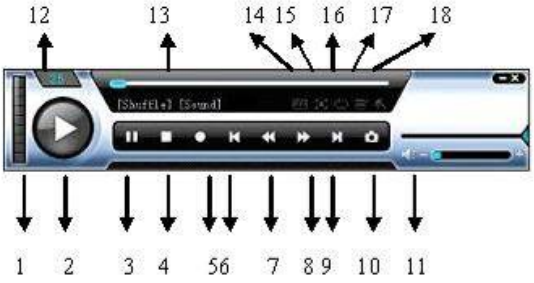


Figure 9-1

9.2 Play File

Click play button (button 2 in Figure 9-1), you can see an interface is shown as in Figure 9-2.

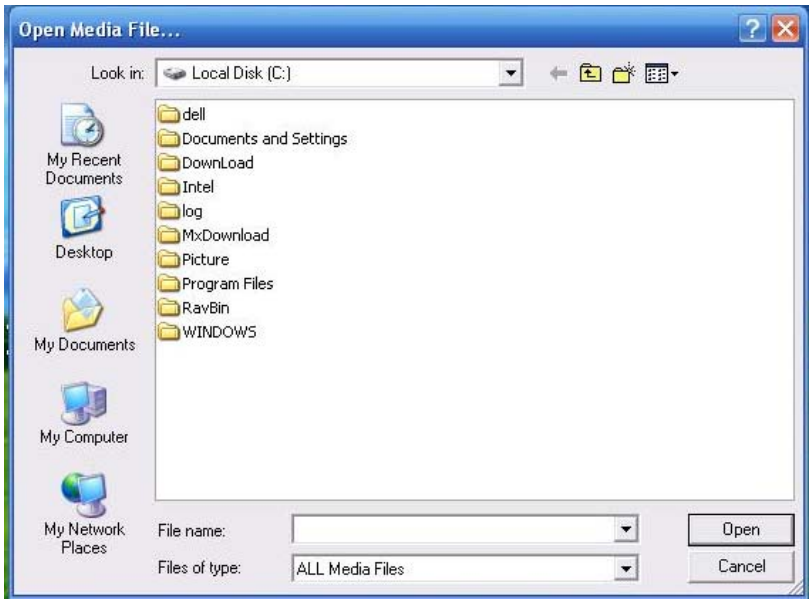


Figure 9-2

Or you can just select the file and then drag it to the player to play.
If there are recorded files in player folder, you can double click player to begin auto play.
Click previous button (button 6 in Figure 9-1) and next button (button 9 in Figure 9-1) to view corresponding files.
When it is PIP mode, left click mouse to drag the small window.
Left double click small window to switch it to big window.

9.3 Right Mouse Menu

Right click mouse, you can see an interface is shown as in Figure 9-3.

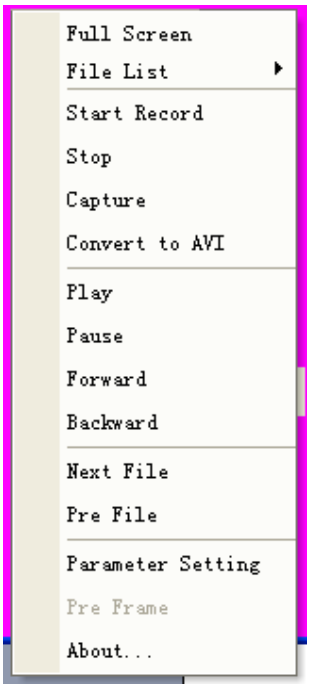


Figure 9-3

9.3.1 Convert to AVI

System supports to convert *.mp4,*.Dav,*.mpge,*.264 file to *.avi

In Figure 9-3, select convert to AVI item. You can see an interface is shown as in Figure 9-4.

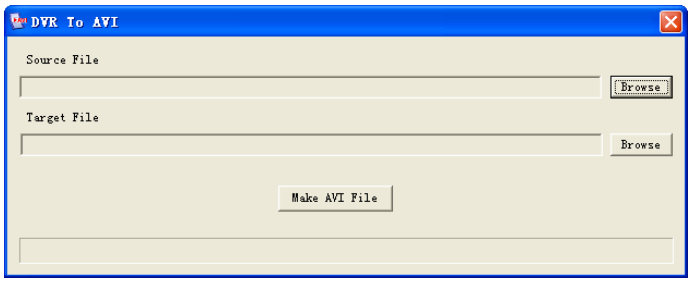


Figure 9-4

Please select the source file and then click browser button after the “target file” to specify the storage location.

Figure 9-5

Now click make AVI file button, you can see there is a processes bar for your reference. See Figure 9-6.

Figure 9-6

Please note; system does not support play and convert one file at the same time.

9.3.2 Parameter Setting

In Figure 9-3, highlight parameter setting item. You can see an interface is shown as in Figure 9-7. Frame rate value ranges from 0 to 100.

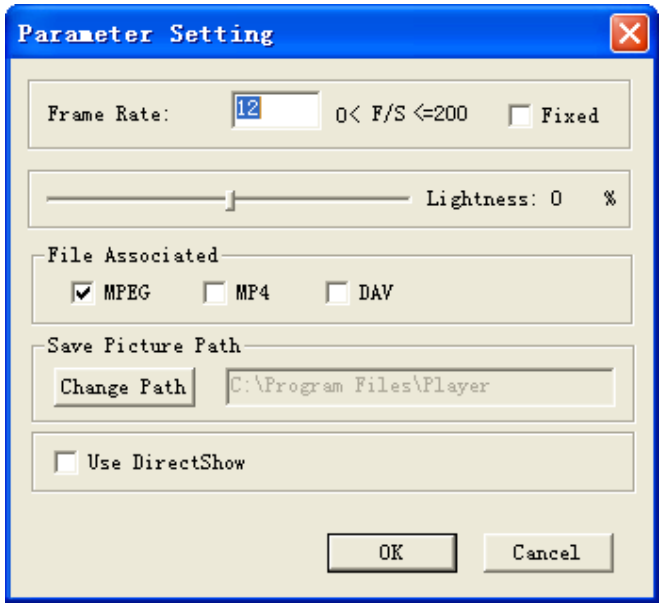


Figure 9-7

- **Modify path**

System default path is player installation location. Click path button, you can see an interface is shown as in Figure 9-8. Now you can modify file storage location.

Figure 9-8

- **Use DirectShow**

If you can not play current file, you can enable this function to try again. If it does not work, then player does not support current file format.

10 FAQ

- System can not boot up.
  - ✧ Input voltage is not right
  - ✧ Power button connection is not good.
  - ✧ Power button is damaged
  - ✧ System upgrade error
  - ✧ HDD malfunction or HDD cable is damaged
  - ✧ Some series is not compatible with Seagate DB35.1，DB35.2，SV35， and Maxtor 17G. Please upgrade to the latest software.
  - ✧ Front panel error
  - ✧ DVR main board is damaged.

- System auto reboots after several minutes or it often goes down.
  - ✧ Input voltage is not stable or it is too low
  - ✧ HDD malfunction
  - ✧ Power button is not sufficient
  - ✧ Ventilation problem or there is too much dust.
  - ✧ DVR hardware problem.

- System can not detect the HDD
  - ✧ Check HDD power cable connection
  - ✧ HDD cable is damaged
  - ✧ HDD malfunction
  - ✧ SATA port is damaged

- No video in single (several or all) channel(s)
  - ✧ Program error. Please upgrade to the latest version.
  - ✧ Brightness becomes o. Restore default setup.
  - ✧ No video input signal or it is too weak
  - ✧ Enabled channel protection function
  - ✧ DVR hardware error.

- Real-time video brightness or color is distorted.
  - ✧ When BNC output, NTSC and PAL setup is not right. The video may becomes black and white
  - ✧ DVR and monitor resistance is not right
  - ✧ Transmission distance is too long or the video transmission cable attenuation is too heavy.
  - ✧ DVR color setup is not right.

- Can not find local video file
  - ✧ HDD cable error
  - ✧ HDD malfunction
  - ✧ Program version problem
  - ✧ The files has been overwritten

- ✧ Searched file has not been open.

- Local searched video is distorted
  - ✧ Video quality setup is too low.
  - ✧ Error occurs when program read and write the data. Thought the displayed bit stream is low, it is full of mosaic when playback. Please reboot.
  - ✧ HDD cable problem
  - ✧ HDD malfunction
  - ✧ DVR hardware error

- There is no audio when monitor
  - ✧ It is not a power pick up
  - ✧ It is not a power speaker
  - ✧ Audio cable is damaged
  - ✧ DVR hardware error

- There is audio when monitor. But it is no audio when playback
  - ✧ Setup problem. Please enable audio function.
  - ✧ Corresponding channel has not enabled video; The playback may not fluent when screen is blue.

- Time display is not right
  - ✧ Setup error
  - ✧ Battery contact is not right or voltage is too low.
  - ✧ Crystal Oscillator error

- DVR can not control PTZ
  - ✧ Front-end PTZ error
  - ✧ PTZ setup is not right. Cable connection or installation is not right.
  - ✧ DVR PTZ setup error
  - ✧ Protocol setup is not compatible.
  - ✧ PTZ address is not right
  - ✧ When connect several decoder please use a 120Ohm between the decoder far A end and B end to eliminate reflection and resistance matching. Otherwise the PTZ control is not stable
  - ✧ The distance is too long.

- Motion detection function does not work
  - ✧ Time period setup is not right
  - ✧ Motion detection zone setup is not right.
  - ✧ Sensitivity is too low.
  - ✧ Hardware problem for some series.

- Can not log in web or client-end

- ✧ Can not install client-end or can not display properly. For Windows ME or Windows 98 user, please upgrade to Windows 2000 sp4 or install the low version client-end.
- ✧ ActiveX control installation is blocked.
- ✧ System needs Dx8.1 (or higher) support. Please upgrade display card driver,
- ✧ Network connection problem.
- ✧ Network setup error
- ✧ Password and user name does not match.
- ✧ Client-end version is not compatible.

- There is no video or there is mosaic when preview or playback remotely.
  - ✧ Network is not fluent
  - ✧ Client-end PC resource is not sufficient
  - ✧ Enable multiple cast function in network setup interface. Usually we do not recommend this mode.
  - ✧ Enable local privacy mask setup or channel protection.
  - ✧ Current account has no monitor right.
  - ✧ Local output video is not good.

- Network connection is not stable
  - ✧ Network is not stable
  - ✧ IP address conflict
  - ✧ Mac address conflict
  - ✧ PC or DVR network card is not good.

- Burning/USB backup error
  - ✧ Burner and HDD are using the same data cable.
  - ✧ Data is too much and occupying too much resources.
  - ✧ Data amount is more than burner free space, which may result in burner error.
  - ✧ Backup device is not compatible.
  - ✧ Backup device is damaged.

- Keyboard can not control DVR
  - ✧ DVR RS232 setup is not correct.
  - ✧ Address is not correct.
  - ✧ Power is not sufficient when there are several switchers.
  - ✧ Transmission distance is too long.

- Alarm signal can not be cancelled
  - ✧ Alarm setup is not correct.
  - ✧ Enable alarm output manually
  - ✧ Input device error or connection is not correct.
  - ✧ Some series has this problem. Please upgrade to the latest version.

- Alarm function does not work
  - ✧ Alarm setup is not correct.
  - ✧ Alarm ground cable connection is not correct.
  - ✧ Alarm input signal is not correct.
  - ✧ Connect two circuits to one alarm device,.

- Remote control does not work
  - ✧ Remote address is not right
  - ✧ Remote control distance is too long or angle is too narrow.
  - ✧ Remote control battery voltage is too low.
  - ✧ Remote control is damaged or DVR front panel is damaged,

- Video storage time is not sufficient
  - ✧ Front-end camera quality is too bad or lens is too dirty.
  - ✧ HDD capacity is not sufficient.
  - ✧ HDD damaged.

- Can not playback the downloaded file.
  - ✧ There is no player
  - ✧ There is no DX8.1 (or higher).
  - ✧ When convert file to .AVI format, please use MEDIA PLAYER to playback. There is no DivX503Bundle.exe plug-in.

- Forgot local admin account password or network password.
  - ✧ Please contact our technical support engineer or local customer service person for help.

Slight difference may be found in user interface.
All the designs and software here are subject to change without prior written notice.
Please visit our website for more information.

Appendix A HDD Capacity Calculation

Calculate total capacity needed by each DVR according to video recording (video recording type and video file storage time).

Step 1: According to Formula (1) to calculate storage capacity q_i that is the capacity of each channel needed for each hour, unit Mbyte.

$$q_i = d_i \div 8 \times 3600 \div 1024 \quad (1)$$

In the formula: d_i means the bit rate, unit Kbit/s

Step 2: After video time requirement is confirmed, according to Formula (2) to calculate the storage capacity m_i, which is storage of each channel needed unit Mbyte.

$$m_i = q_i \times h_i \times D_i \quad (2)$$

In the formula:

h_i means the recording time for each day (hour)

D_i means number of days for which the video shall be kept

Step 3: According to Formula (3) to calculate total capacity (accumulation) q_T that is needed for all channels in the DVR during **scheduled video recording**.

$$q_T = \sum_{i=1}^{c} m_i \quad (3)$$

In the formula: c means total number of channels in one DVR

Step 4: According to Formula (4) to calculate total capacity (accumulation) q_T that is needed for all channels in DVR during **alarm video recording (including motion detection)**.

$$q_T = \sum_{i=1}^{c} m_i \times a\% \quad (4)$$

In the formula：$a\%$ means alarm occurrence rate

Appendix B Compatible USB Drive List

NOTE: Please upgrade the DVR firmware to latest version to ensure the accuracy of the table below. If you use the USB drive, please confirm the format FAT or FAT32.

Manufacturer	Model	Capacity
Sandisk	Cruzer Micro	512M
Sandisk	Cruzer Micro	1G
Sandisk	Cruzer Micro	2G
Sandisk	Cruzer Freedom	256M
Sandisk	Cruzer Freedom	512M
Sandisk	Cruzer Freedom	1G
Sandisk	Cruzer Freedom	2G
Kingston	DataTraveler II	1G
Kingston	DataTraveler II	2G
Kingston	DataTraveler	1G
Kingston	DataTraveler	2G
Maxell	USB Flash Stick	128M
Maxell	USB Flash Stick	256M
Maxell	USB Flash Stick	512M
Maxell	USB Flash Stick	1G
Maxell	USB Flash Stick	2G
Kingax	Super Stick	128M
Kingax	Super Stick	256M
Kingax	Super Stick	512M
Kingax	Super Stick	1G
Kingax	Super Stick	2G
Netac	U210	128M
Netac	U210	256M
Netac	U210	512M
Netac	U210	1G
Netac	U210	2G
Teclast	Ti Cool	128M
Teclast	Ti Cool	256M
Teclast	Ti Cool	512M
Teclast	Ti Cool	1G
Teclast	Ti Cool	2G

Appendix C Compatible CD/DVD Burner List

NOTE: Please upgrade the DVR firmware to latest version to ensure the accuracy of the table below. And you can use the USB cable with the model recommended to set USB burner.

Manufacture	Model	Port	Type
Sony	DRX-S50U	USB	DVD-RW
Sony	DRX-S70U	USB	DVD-RW
Sony	AW-G170S	SATA	DVD-RW
Samsung	TS-H653A	SATA	DVD-RW
Panasonic	SW-9588-C	SATA	DVD-RW
Sony	DRX-S50U	USB	DVD-RW
BenQ	5232WI	USB	DVD-RW

Appendix D Compatible CD/DVD CD List

Please refer to the following sheet for compatible CD/DVD burner list.

Manufacture	Capacity	Type
Mitsubishi	4.37GB	DVD+RW
Mitsubishi	4.37GB	DVD+R
Mitsubishi	702MB	CD+RW
Sony	4.37GB	DVD+R
Sony	4.37GB	DVD-R
Maxell	4.37GB	DVD-R
Maxell	4.37GB	DVD+R
BenQ	4.37GB	DVD+RW
Verbatim	4.37GB	DVD-R
TDK	4.37GB	DVD-R
Tsinghua Tongfang	4.37GB	DVD+R

Appendix E Compatible SATA HDD List

NOTE: Please upgrade the DVR firmware to latest version to ensure the accuracy of the table below. And SATA HDD should be used for the DVR with SATA port.

Manufacturer	Series	Model	Capacity	Type
Seagate	Barracuda.10	ST3750640AS	750G	SATA
Seagate	Barracuda.10	ST3500630AS	500G	SATA
Seagate	Barracuda.10	ST3400620AS	400G	SATA
Seagate	Barracuda.10	ST3320620AS	320G	SATA
Seagate	Barracuda.10	ST3250620AS	250G	SATA
Seagate	Barracuda.10	ST3250820AS	250G	SATA
Seagate	Barracuda.10	ST3160815AS	160G	SATA
Seagate	Barracuda.10	ST380815AS	80G	SATA
Seagate	Barracuda.9	ST3160811AS$_2$	160G	SATA
Seagate	Barracuda.9	ST3120811AS$_2$	120G	SATA
Seagate	Barracuda.9	ST380811AS$_2$	80	SATA
Seagate	Barracuda.9	ST380211AS$_2$	80G	SATA
Seagate	Barracuda.11	ST3750330AS	750G	SATA
Seagate	Barracuda.11	ST3500320AS	500G	SATA
Maxtor	DiamondMax 20	STM3320820AS	320G	SATA
Maxtor	DiamondMax 20	STM3250820AS	250G	SATA
Maxtor	DiamondMax 21	STM3160211AS	160G	SATA
Maxtor	DiamondMax 21	STM380211AS	80G	SATA
Maxtor	DiamondMax 21	STM340211AS	40G	SATA
Western Digital	Cariar SE	WD3200JD	320G	SATA
Western Digital	Cariar SE	WD3000JD	300G	SATA
Western Digital	Cariar SE	WD2500JS	250G	SATA
Western Digital	Cariar SE	WD2000JD	200G	SATA
Western Digital	Cariar SE	WD1600JD	160G	SATA
Western Digital	Cariar SE	WD1600JS	160G	SATA
Western Digital	Cariar SE	WD1200JS	120G	SATA
Western Digital	Cariar SE	WD800JD	80G	SATA
Western Digital	Cariar	WD1600AABS$_2$	160G	SATA
Western Digital	Cariar	WD800BD	80G	SATA
Western Digital	Cariar SE16	WD7500KS$_2$	750G	SATA
Western Digital	Cariar SE16	WD5000KS$_2$	500G	SATA
Western Digital	Cariar SE16	WD4000KD$_2$	400G	SATA
Western Digital	Cariar SE16	WD3200KS$_2$	320G	SATA
Western Digital	Cariar SE16	WD2500KS$_2$	250G	SATA

Appendix F LIMITED WARRANTY

IC Realtime, LLC warrants that for a period of ninety (90) days from the date of shipment from IC Realtime, LLC: (i) the media on which the Hardware/Software is furnished will be free of defects in materials and workmanship under normal use; and (ii) the Hardware/Software substantially conforms to its published specifications. Except for the foregoing, the Hardware/Software is provided AS IS. This limited warranty extends only to Customer as the original licensee. Customer's exclusive remedy and the entire liability of IC Realtime, LLC and its suppliers under this limited warranty will be, at IC Realtime, LLC or its service center's option, repair, replacement, or refund of the Hardware/Software if reported (or, upon request, returned) to the party supplying the Hardware/Software to Customer. In no event does IC Realtime, LLC warrant that the Hardware/Software is error free or that Customer will be able to operate the Hardware/Software without problems or interruptions.

This warranty does not apply if the Hardware/Software (a) has been altered, except by IC Realtime, LLC, (b) has not been installed, operated, repaired, or maintained in accordance with instructions supplied by IC Realtime, LLC, (c) has been subjected to abnormal physical or electrical stress, misuse, negligence, or accident, or (d) is used in ultrahazardous activities.

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Manufacturer is IC Realtime, LLC, 3050 N Andrews Ave Ext, Pompano Beach, FL 33064.

Slight difference may be found in user interface.
All the designs and Hardware/Software here are subject to change without prior written notice.
Please visit our website for more information.